

12-2001

## Legacy - December 2001

South Carolina Institute of Archaeology and Anthropology--University of South Carolina

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# Legacy

South Carolina Institute of Archaeology and Anthropology

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## The Archaeology of Cattle Raisers at the Catherine Brown Cowpen

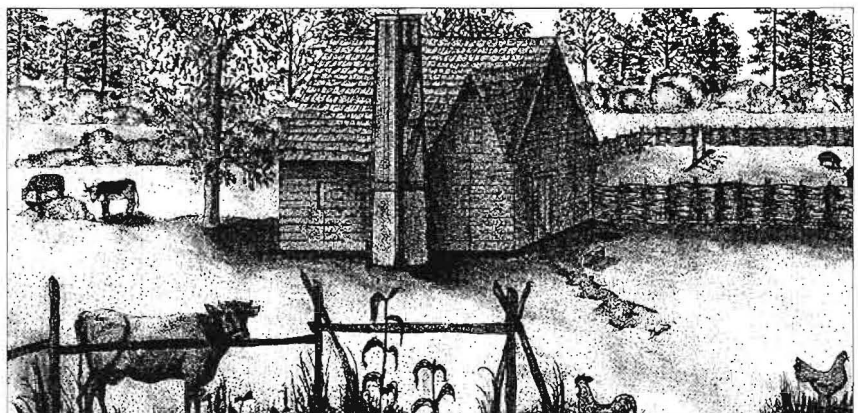
By Mark Groover and Richard Brooks

During the Fall of 2000, we completed a research monograph on investigations at the Catherine Brown cowpen (site 38BR291). The results of archaeological excavations conducted at the Catherine Brown cowpen are summarized in *Living on the Edge: The Archaeology of Cattle Raisers in the South Carolina Backcountry*. The Brown cowpen was located near Steel Creek in Barnwell County, South Carolina, on the Savannah River Site, a nuclear research facility operated by the U. S. Department of Energy. Data recovery excavations were conducted in 1984 at the Brown site by SRARP personnel in response to the L-Lake

project. The L-Lake project created a small reservoir on the SRS. The recent monograph about the Brown site presents an expanded study of the original site investigations.

Occupied between the 1750s and early 1780s, the Catherine Brown cowpen was located on the edge of colonial settlement in the South Carolina backcountry. Cattle raising was an important part of the frontier economy in the South, yet the topic has not been fully addressed by historians or archaeologists. The archaeology conducted at the site is significant since it provides a rare glimpse of material conditions

See **BROWN COWPEN**, Page 5



Sketch of the dwelling at the Catherine Brown Cowpen. (SCIAA drawing)

# Vista

By Bruce Rippeteau, Director

**Legacy**, published twice this year, is the newsletter of the SC Institute of Archaeology and Anthropology, University of South Carolina. **Bruce Rippeteau, Director**  
**Nena Powell Rice, Chief Editor, Layout, Design, and Production**

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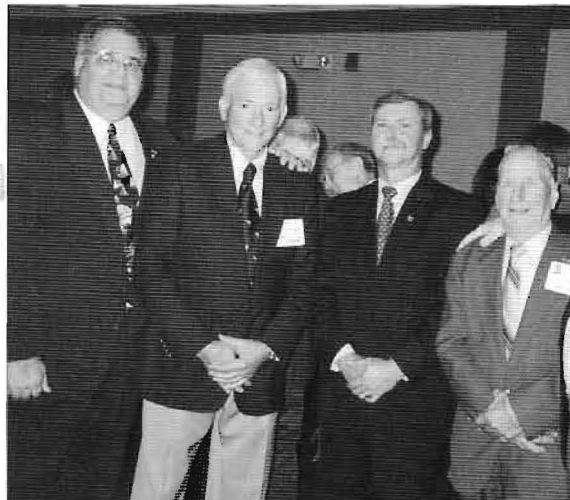
Nena Powell Rice

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It has been quite a last few months. On our minds have to be September 11 and its terrorist acts, and the anger we all feel and the continuing effects we all are experiencing in the economy and the changes in what is important to us personally and as a society.

Further, the state of the university budget situation has been darkening what with the statewide loss of tax revenue streams. The university has been spared by Governor Hodges the worst cutbacks to date, and USC President Palms and Dean Stewart of our home in the College of Liberal Arts work tirelessly to spare us some of



From left to right: SCIAA Director Bruce Rippeteau, SCIAA ART Board Chair Jim Kirby, *Hunley* Commission member Randy Burbage, and a *Redfin* submariner survivor attending a *Hunley* submarine talk by Mr. Burbage at the reunion of the US *Redfin* submarine crews on October 6, 2001 in North Charleston. (SCIAA photo)

the additional cutbacks of November.

Not only from the articles and illustrations which Editor Nena



Chester DePratter (left) and Stanley South (center) were honored by the Director of the National Park Service with Certificates of Appreciation, presented by Bruce Rippeteau (right) at the recent SCIAA staff meeting in Columbia, for assisting in the development of the National Historic Landmark nomination for French Charlesfort and Spanish Santa Elena. (SCIAA photo)



Bruce Rippeteau, Director. (SCIAA photo by Daryl P. Miller)

Powell Rice has provided for us, but also from the programs, accomplishments, and notices of staff, we still have so much to work on and to look forward to. Indeed, we honor the fallen—in the course of life or by tragedy—by our current and future efforts to find and reveal archaeological information and value.

In this season of hope and peaceful aspirations, we end the first year of the new millennium. We, at SCIAA, thank you for your participation in the great endeavor of archaeology and we wish us all well!

AN ARCHAEOLOGICAL CONFERENCE FOR THE PUBLIC

# The Allendale-Topper Site Conference Ice Age Man in South Carolina

Dates: January 25-26, 2002

The Capstone Conference Center  
The University of South Carolina  
Columbia, South Carolina

Friday, Jan. 25, 1:00-5:00 PM

Open House with Allendale-Topper artifact display at the SC Institute of Archaeology and Anthropology, USC followed by a Friday evening reception to meet the project scientists.

Saturday, January 26th 8:30 AM - 5:00 PM

At The Capstone Conference Center - Campus Room  
Presentations Offered by Topper Site Scientists

Dr. Steve Forman, OSL Dating at Topper  
Dr. John Foss, Soils and Prehistory in Allendale  
Dr. Albert C. Goodyear, Topper Artifacts  
Dr. Stephen Jackson, Pleistocene Biogeography of the S.E.  
Dr. Marvin Kay, Stone Tool Microscopy  
Dr. Lucinda McWeeney, Paleobotany  
Dr. Thomas Stafford, Radiocarbon Dating and Stratigraphy  
Dr. Dennis Stanford, The Eastern Seaboard and Europe  
Dr. Michael Waters, Geoarchaeology of Topper

Poster Program: Eugene Karabonov, Angie McManus, and Brandy Glett, Sedimentary Framework for the Turnaround Site.

Saturday Evening 5:30-9:00 PM

Cash bar reception upstairs at the Top of Carolina restaurant, followed by a banquet, and presentation "The Future for Early Man Studies in the Southeast and the Role of a Center" in the Campus Room.

#### Registration

Contact Dr. Al Goodyear, SC Institute of Archaeology and Anthropology, University of South Carolina, 1321 Pendleton St., Columbia, SC 29208 (803) 777-8170; or you may send an email to [goodyear@sc.edu](mailto:goodyear@sc.edu). For on-line registration go to [www.preciovis.net/topper](http://www.preciovis.net/topper). Registration fee of \$125 also includes banquet (\$100 is tax deductible). Student rate is \$25. Make checks payable to USC Ed. Foundation, Allendale.

#### Hotel Reservations

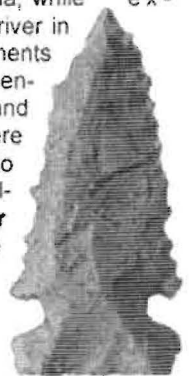
Rooms are reserved at the Clarion Townhouse Hotel, 1615 Gervais St., Columbia, SC 29201. Call (800) 277-8711 and ask for Allendale Archaeology.



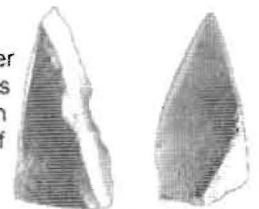
#### THE TOPPER SITE

In 1998, archaeologists from the Institute of Archaeology and Anthropology at the University of South Carolina, while excavating a **prehistoric site** on the Savannah river in Allendale County, SC, discovered stone implements far deeper in the ground than they had ever encountered before. Subsequent excavations and studies have revealed that ancient humans were present **16,000** or more years ago, some two to three thousand years earlier than previously allowed by textbooks. Known as the **Topper Site**, it appears to be one of three sites in the eastern U.S. that shows that man was in the western hemisphere during the last **Ice Age**. The Topper discovery has received national and international media attention from CNN, U.S. News and World Report, Newsweek, The National Geographic, the New York Times, Scientific American and Science Magazine. It is currently the subject of a special program being developed by S.C. Educational Television.

This conference seeks to bring together members of the public and the scientists who are studying this important site in an effort to disseminate the current state of scientific findings.



TAYLOR POINT



BURIN-LIKE TOOLS



THE UNIVERSITY OF SOUTH CAROLINA  
SC INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY



The Archaeological  
Research Trust  
SCIAA



# Savannah River Archaeological Research

## Archaeological Excavations at the George Galphin Site

By Tammy Forehand

With the fourth Saturday volunteer excavations resuming on September 22, 2001, after a break over the summer, Augusta Archaeological Society (AAS) members Kevin Eberhard and Jill Trefz assisted me and Leisha Allen of the Savannah River Archaeological Research Program (SRARP) in site preparation on September 18. With no work having been conducted at the Galphin site since May, it took quite an effort to get the site in shape for Saturday's dig (mowing, raking, removing unwelcome critters from the old units, setting out new units, and so forth).

The volunteer excavation on the 22nd was held in conjunction with South Carolina Archaeology Month. Overall it was a great day with six visitors touring the site, and a total of 14 people participating in the actual dig. Among the volunteers were AAS member Kevin Eberhard and Galphin descendant Tom Galphin along with his fiancée, Amy Burns. I look forward to exchanging information with Tom and Amy and having them participate in future work at the site.

Archaeologists excavated four 1 by 2-meter test units, and several

features were encountered including two small pits and several postholes.

At least two of the postholes appear to be remnants of a structure, first identified earlier this year, that extends into unexcavated territory towards the east.

This structure is located to the east of the proposed well

and to the southeast of a structure identified during an archaeological field school with students from Augusta State University in 1999. Fragments of artifacts typical of the 18th century, including delft, creamware, white salt-glazed stoneware, lead-glazed earthenware, porcelain, tobacco pipes, wine bottles, and wrought nails, were recovered throughout the day.

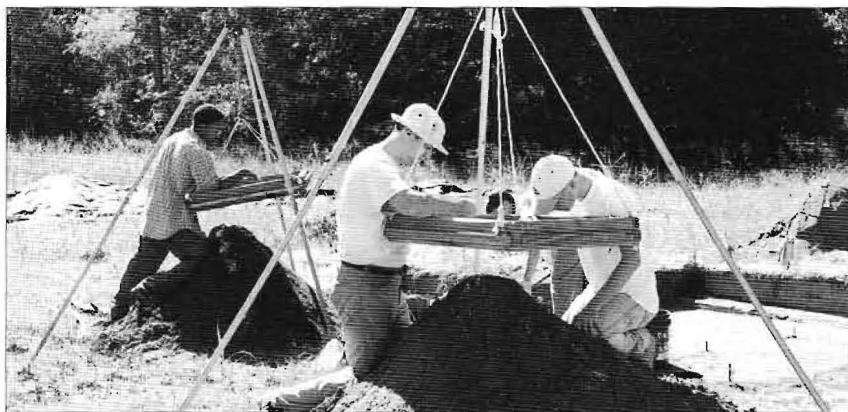
As the volunteer excavations continue, future excavations will concentrate on delineating the boundaries of the palisade, as well as determining the function, size, and method of construction for the remaining structures identified



Students and teacher from Aiken Christian School (right) receiving a lesson in colonial-period artifacts from Tammy Forehand (left). (SRARP/SCIAA photo)

during the analysis of the artifact distributions. An additional 40 square meters will be opened during the upcoming field season to complete a 12 by 15-meter block. It will then be "all hands on deck" in order to clean the entire block and ready it for photographing and feature excavation.

Excavations at the site are being used as an educational tool to teach local school groups and civic organizations about the importance of archaeology, archaeological techniques, site destruction and preservation, and local history. During the past fiscal year, numerous visitors toured the site and observed in-progress excavations including students from Aiken Christian School. Local Boy Scout troops and a Cub Scout pack have also participated in the volunteer excavations, alongside our seasoned veterans that include some members of the Augusta Archaeological Society and the Archaeological Society of South Carolina. If you are interested in participating in the fourth Saturday volunteer excavations, please contact me by calling 803-725-5259 or 3623 or e-mail to: [forehand@sc.ed](mailto:forehand@sc.ed)



SRARP employee Patrick Lowe (center) and AAS member Jill Trefz (center background) with two students from Burke County High School participating in excavations at the Galphin site. (SRARP/SCIAA photo)

## BROWN COWPEN, From Page 1

associated with livestock raisers that resided on the colonial frontier. To date, the Brown site is the only cowpen that has been intensively excavated in South Carolina. Archaeological investigations at the site uncovered the remains of an earthfast or post-in-ground English-style cottage, an adjacent cattle pen, and a smokehouse. The cattle pen contained a butchering area and several activity areas denoted by prominent artifact concentrations. Archaeological information indicates the improvements at the site had been burned in the early 1780s. Interestingly, members of the Brown family were Patriots during the American Revolution and supplied beef to Patriot forces. Further, the recovery of a 1781 Irish halfpenny, several musket balls and flints, and a Royal Provincial military uniform button suggests the cowpen may have been intentionally destroyed by the British during the Revolutionary War.

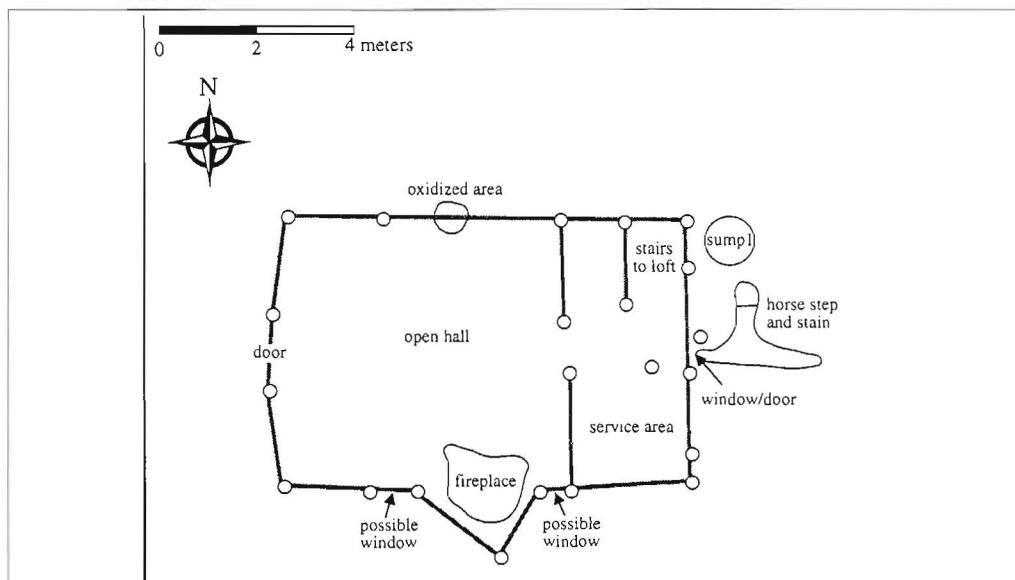
In addition to glimpses of military activity at the site, excavations also revealed that material culture and everyday life at the cowpen were characterized by both continuity and culture change.

Cultural continuity is illustrated by the persistence of several folk-based material traditions at the site. Conversely, culture change within the Brown household is aptly illustrated by the use of industrially manufactured consumer goods. The site was occupied by the Catherine Brown household. The Brown family originally resided in Virginia before settling the cowpen. Based on land and slave ownership, the Brown family was among the upper quarter of wealthholders in the study area. Although the Brown family was affluent by backcountry standards, considered in its entirety, the material culture used by the site residents was relatively modest. This characteristic suggests the Brown family practiced a standard of living that was probably similar to most of their neighbors. In addition to an unassuming standard of living, the material culture documented at the site also illustrates an interesting amalgam of folk traditions. Catherine and her husband Bartlett Brown may have been Welsh. Possible Welsh influences at the site were evident in the dwelling size, floor plan, chimney construction, and chimney placement. Welsh material traditions are

also possibly indicated by the fence styles that were used to construct the livestock enclosure.

Although domestic architecture and landscape elements at the site reflect European folk influences, the material culture used by the site residents indicates they also relied upon locally produced colono ware as a utilitarian ceramic. Colono ware, a type of colonial period folk pottery, was probably manufactured by enslaved individuals at the site or local Native Americans. Colono ware comprises a third of the ceramics recovered from excavations. Although the material record encountered at the site demonstrates continuity with folk architectural and ceramic traditions, culture change is also indicated by the appreciable amount of industrially manufactured goods recovered from the residence. As indicated by discarded tableware, teaware, glass wine bottles, tobacco pipe fragments, and personal objects, the residents of the Brown site actively participated in the formative consumerism and popular culture that began during the 18th century with the advent of industrial-level manufacturing in England. Residing on the edge of settlement in the

South Carolina backcountry, members of the Brown household relied upon folk-based material traditions that originated with several different ethnic groups. However, they also adopted early consumerism that eventually became a distinguishing characteristic of material life during the 19th and 20th centuries in North America.



Map of the Welsh-style dwelling excavated at the Catherine Brown cowpen. (SRARP/SCIAA drawing)

# Age and Climatic Correlates of Carolina Bays and Inland Dunes of the South Atlantic Coastal Plain: New Data

By Mark J. Brooks and Barbara E. Taylor

Mark J. Brooks (USC, SCIAA-SRARP), Barbara E. Taylor (University of Georgia, Savannah River Ecology Laboratory [SREL]), and Andrew H. Ivester (State University of West Georgia, Department of Geosciences) obtained 11 Optically Stimulated Luminescence (OSL) dates on quartz sand from inland eolian dunes and Carolina bay sand rims in South Carolina. The OSL technique dates the time that the sand, which is ubiquitous to the Coastal Plain, was last exposed to sunlight. A major advantage of OSL dating is that accurate dates can be obtained going back to ~120 ka B.P., whereas radiocarbon dates older than ~30 ka B.P. may be unreliable. The samples were processed by the Thermally and Optically Stimulated Luminescence Research Laboratory, Department of Earth Sciences, Dalhousie University, Halifax, Nova Scotia, Canada.

Carolina bays, which were particularly attractive to prehistoric

humans, were formed and oriented NW-SE by the action of southwesterly winds on ponded water. During low-water stands, the exposed eastern shoreface was the sediment source for eolian deposition that formed the characteristic sand rim on the east side of bays.

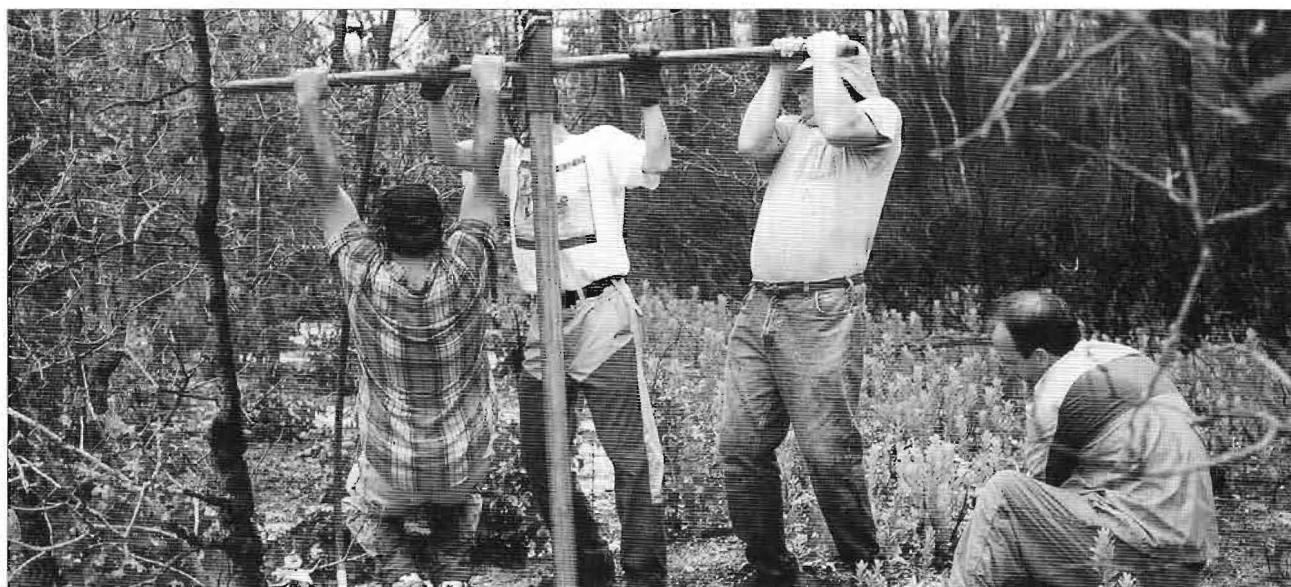
Inland dunes occur on the northeast side of southeasterly flowing rivers and were also formed by southwesterly winds; sand was swept from braided channel deposits exposed during low-water phases at a time(s) when floodplains of the Coastal Plain were much more sparsely vegetated than at present.

The formation of both bay rims and inland dunes by southwesterly winds deriving sediments from immediately adjacent sources exposed during low water (dry climate?), coupled with the observation that in some areas bays and dunes intrude into one another, have lead researchers to suspect that formation of bays and dunes was

penecontemporaneous and that their formation required specific climatic regimes.

On the U. S. Department of Energy's Savannah River Site (SRS), adjacent to the Savannah River in the Upper Coastal Plain, two OSL dates from the rim of Flamingo Bay indicate that the bay formed initially at  $108.7 \pm 10.9$  ka B.P. and was rejuvenated at  $40.3 \pm 4.0$  ka B.P. A single date from Bay 40 indicates that it formed at  $77.9 \pm 7.6$  ka B.P.

On Shaw Air Force Base's Poinsett Electronic Combat Range, about 10 km east of the confluence of the Wateree and Congaree Rivers in the Middle Coastal Plain, a large-scale eolian sand sheet emanating from the confluence area encroached into the western side of Big Bay at  $74.3 \pm 7.1$  ka B.P. The bay was fully formed at the time of encroachment, and the 4.5 m of organically enriched, pedogenically modified bay fill buried beneath the sand sheet indicates that bay formation occurred



Mark Brooks (left), Daniel Ryan (Shaw AFB), Peter Stone (SC DHEC), and Eric Wright (Coastal Carolina University) vibra-coring at Big Bay. (SREL photo by Barbara Taylor)



Andrew Ivester (State University of West Georgia) taking an OSL sample at Big Bay. (SREL photo by Barbara Taylor)

well before that time, plausibly at the time of Flamingo Bay's initial formation. Dates on two parabolic dunes on the sand sheet were  $29.6 \pm 2.4$  ka B.P. and  $33.2 \pm 2.8$  ka B.P.

Five OSL dates were obtained from surficial dunes on Sandy Island, located on the Lower Coastal Plain between the Waccamaw and Great Pee Dee Rivers. The dates are:  $29.9 \pm 2.8$  ka B.P.,  $31.4 \pm 2.5$  ka B.P.,  $35.8 \pm 4.8$  ka B.P.,  $36.7 \pm 6.0$  ka B.P., and  $39.0 \pm 4.5$  ka B.P.

From these data, bays appear to be older than dunes. In reality, it may be that once bays are formed, their distinctive morphology is less likely to be obliterated through subsequent reworking of sediments than are the more surficial, easily eroded dunes. The sand sheet that encroached into Big Bay informs on these related issues of relative bay / dune age and sediment reworking. While the toe or leading edge of the sand sheet encroached into Big Bay around 74 ka B.P., the sand sheet as a large-scale geomorphic body must be much older 10 km to the west adjacent to its source. Thus, Big Bay and the sand sheet may well have originated at about the same time, well before 74 ka B.P. The two geomorphically distinct parabolic

dunes on the surface of the sand sheet owe their distinctiveness to their relatively recent age, which probably represents the last major interval of eolian reworking.

Comparison of dune and bay dates with the Oxygen Isotope record provides a basis for tentative inferences regarding late Pleistocene climate in this area of the Southeast. The  $108.7 \pm 10.9$  ka B.P. date from Flamingo Bay spans Oxygen Isotope Stages (OIS) 5d-5c during the early Wisconsinan, immediately following the Sangamon interglacial. Glacial ice at that time may have been only slightly greater than present. The  $77.9 \pm 7.6$  ka B.P. date for Bay 40 falls during OIS 5a, an interval of less ice following an increase in ice during OIS 5b. The  $40.3 \pm 4.0$  ka B.P. date for Flamingo Bay bridges a peak during OIS 3 that also corresponds to a brief interval of less ice. Thus, it appears that Carolina bay dates occur during periods of less ice that, presumably, correspond to somewhat warmer conditions and increases in moisture that would be necessary for ponding in bay formation. As for drier periods that would be necessary for eolian deposition of the sand rims, our dating resolution is inadequate to determine if the shifts between moist

and dry conditions were at a seasonal or even longer time scale involving a change in climate.

The dunes all date between 40 and 30 ka B.P., during OIS 3. This was a time of general increase in ice that continued up to the last glacial maximum near 18 ka B.P. during OIS 2. Presumably, the climate in this unglaciated area was becoming colder and drier. The pollen record at White Pond, South Carolina, indicates cold, dry climate at the time of the glacial maximum. Further, dry conditions and sparse vegetation, at least in floodplain source areas, would seem to be a prerequisite for eolian deposition.

Of possible relevance to regional trends in late Pleistocene climate, Ivester and colleagues have reported that most of their OSL and radiocarbon dates bearing on dune activity in the Coastal Plain of Georgia range between 30 and 15 ka B.P. The earlier dates for dune activity in South Carolina suggest that cold, dry climate associated with the glacial advance may have occurred earlier in South Carolina than in Georgia. Well-dated pollen from numerous locales of appropriate age throughout the south Atlantic Coastal Plain could resolve this question.

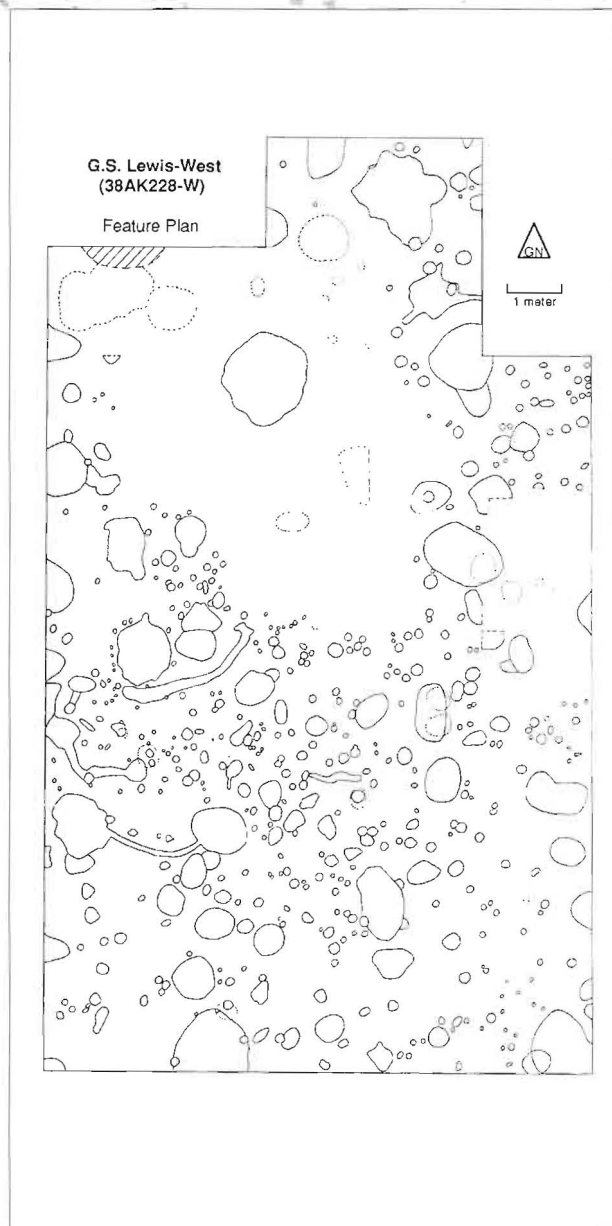


# Recent Analysis from the Woodland Period G. S. Lewis-West Site Along the Middle Savannah River

By Keith Stephenson and Jamie Civitello

One of the most well excavated Woodland period sites in the interior Coastal Plain is the G.S. Lewis-West site. Situated along a swamp terrace at the confluence of Upper Three Runs and the Savannah River floodplain on the Savannah River Site, the Lewis-West site was excavated by staff and volunteers of the Savannah River Archaeological

Research Program-SCIAA in the 1980s. As a portion of the site lies beneath several feet of modern overburden from the 1950s dredging of a nearby canal, site configuration could



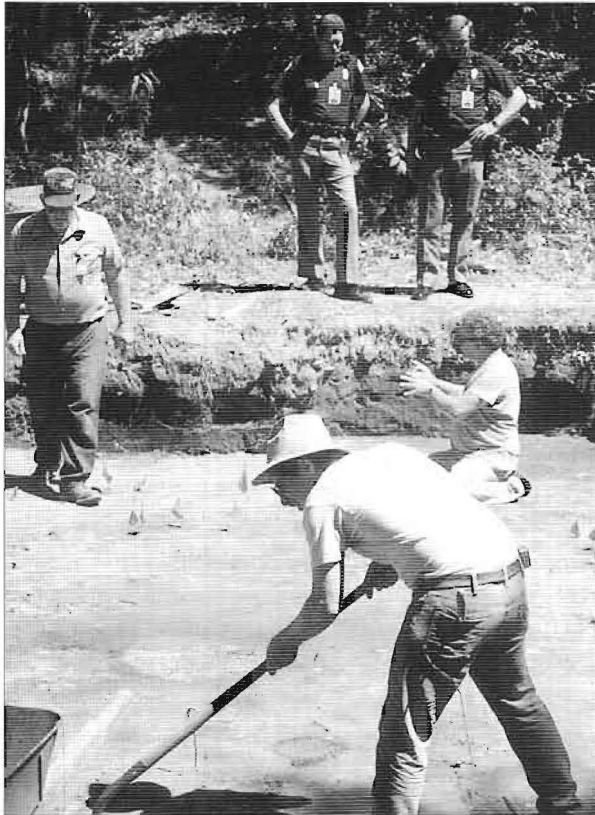
Plan view of cultural features at G. S. Lewis-West site (SRARP/SCIAA drawing)



The late George S. Lewis excavating at the site named in his honor. (SRARP/SCIAA photo)

not accurately be determined. Removal of a 25-centimeter-thick midden in a 154-square-meter block exposed more than 500 cultural features including large river mussel shell-filled pits and postmolds indicative of intensive human occupation. Postmold patterns revealed the presence of several house structures. Several of the

larger features produced sherd assemblages with the potential for ceramic seriation, as well as carbonized wood material for obtaining radiocarbon dates. Altogether, just over 50,000 sherds representing a range of decorative styles were recovered during excavation of the site. The most prevalent types were Middle Woodland Deptford Linear Check Stamped and Late Woodland Savannah Cord Marked. An associated minority ware included red-painted zoned Check Stamped sherds resembling the Deptford type known as Brewton Hill Zoned Punctated. Formal lithic tools included Yadkin Triangular bifaces, found with the Deptford ceramics, and small triangular points associ-



David Anderson leading volunteers during excavation of the G. S. Lewis-West site. (SRARP/SCI AA photo)

ated with the Cord Marked pottery.

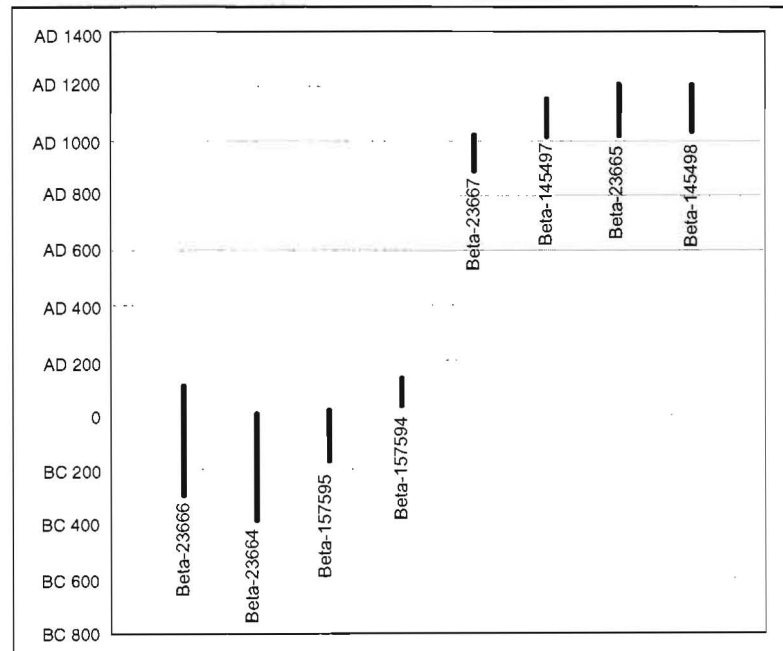
A recent series of radiocarbon dates from the site has helped to clarify our understanding of the range of site occupation. A total of eight conventional and AMS dates have been obtained on charcoal samples and sooted sherds from several of the features. Interestingly, the calibrated radiocarbon results show a bimodal distribution. The earliest date range spans the time from ca. 390 B.C. to A.D. 130. This time frame falls within the Middle Woodland Deptford I and II phases [ca. 600 B.C. to A.D. 500] for the middle Savannah River valley. The later dates range between A.D. 890 and 1,200, falling within the Late Woodland Savannah I phase [ca. A.D. 800 to 1,100] for the

Middle Savannah River valley. We expect additional assays from undated features to adhere to this emerging temporal pattern of site occupation. These efforts will enhance seriation of site features, as well as their ceramic and lithic tool contents, ultimately enabling us to comment on site function and broader relational aspects to Middle and Late Woodland sites in the interior of the Savannah River Site.

Additionally, archaeobotanical

analysis for the site includes six samples from five features totaling 80.25 liters of soil processed through flotation. Overall, the botanical assemblage stands out when com-

pared to other Middle Woodland assemblages analyzed in the state, mostly because all others are from Lower Coastal Plain sites, with the exception of one Middle Woodland assemblage from the Piedmont. Wood charcoal differs most from other Middle Woodland sites, with southern pine dominating and comprising the largest percentage (96%) of total weight of all wood identified, whereas in other parts of the state hickory and oak are better represented. The nutshell from the Lewis-West site compares more closely with other Middle Woodland sites in that hickory dominates (93%) with some occurrences of acorn and hazelnut. Seed densities appear to be similar to other assemblages as well, indicating a woods/marsh habitat. One maygrass seed, *Phalaris caroliniana*, has been identified. More samples remain to be analyzed, with exciting possibilities for understanding the dynamics of Middle Woodland human-plant interrelationships, especially those concerning mast resources, maygrass, and wood-fuel consumption.



Radiocarbon and AMS dates for the G. S. Lewis-West site. (SRARP/SCI AA drawing by Farrah Brown)

# Excavations at Bush Hill Plantation

By Melanie Cabak and Mark Groover

Between 1995 and 1998, data recovery excavations were conducted at Bush Hill plantation on the SRS. The excavations, directed by Melanie Cabak, occurred in response to the construction of an Aiken County landfill in the area surrounding site 38AK66, also called the Bush site. The Bush site was a cotton plantation that was occupied between 1790 and 1920. Investigations resulted in the complete excavation of the planter's residence at the site. The main house at the plantation was occupied by three generations within the George Bush extended family.

A two-volume monograph on the archaeology at Bush Hill plantation is currently being completed by the authors. The report will be available in 2002. The archaeological study of Bush Hill plantation has been guided by several research questions. Information from the site has been used to critically question the prevalent perception that most Southern planters maintained luxurious lifestyles characterized by material excess. Site investigations explored the relationship between wealth and material life among the planter family. To examine the relationship between wealth and the standard of living practiced by the Bush family, archival records were contrasted against the material culture recovered from the archaeological record. The socio-economic position of the Bush family was first determined through detailed analysis of economic records. Landholdings, slaveholdings, and agricultural production at the plantation were first reconstructed and then compared to other planters in the surrounding community. This comparison indicated that the Bush

family was part of the upper wealth group in the study area. Analysis results also indicated that the Bush family was very affluent and economically atypical compared to other planters in the surrounding community.

Having determined the relative socio-economic status of the planter family, material life at the plantation revealed archaeologically was then examined. Consideration of this topic indicated that domestic architecture served to convey the resident's social position to the surrounding community. Conversely, it appears that household furnishings were not used to reinforce social status.

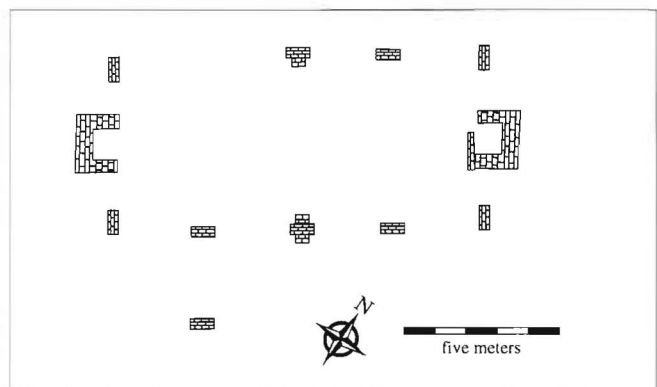
Regarding domestic architecture, the George Bush family lived in a two story, wooden frame dwelling called a Carolina I-house. Although the dwelling at Bush Hill was not an elaborate residence, compared to showplace manor houses occupied by a very small number of planters, I-houses were nonetheless markers of rural affluence during the 19th century among prosperous farmers and planters. Melanie Cabak and Mary Inkrot with the SRARP had previously conducted a study of architectural styles and dwellings that existed on the SRS in the 1950s.

Interestingly, the results of their architectural study indicated that two story dwellings were very rare in the middle Savannah River valley, and were used by

less than 2 percent of the population. Similar trends were undoubtedly prevalent during the antebellum period.

Although the George Bush family used their dwelling as a subtle symbol of rural affluence, the material culture at the site, for the most part, was relatively modest. The Bush family predominantly used inexpensive household and personal goods. The transfer-printed ceramics and cut glass tableware recovered from the site were exceptions to the family's apparent emphasis on inexpensive household items.

The results of artifact analysis indicated that despite substantial financial resources, the Bush family did not live extravagantly, and clearly not to the extent typically associated with planter households. However, although the Bush family appears to have been frugal regarding the use of household goods, they discarded a large amount of material. Consequently, socio-economic class may not be directly reflected in the quality of items that they used and discarded, but in the sheer quantity of material that they consumed. Information from the Bush site therefore suggests that among some households, consumption levels revealed by artifact density might be a more accurate indicator of wealth than the actual quality or expense of items recovered from excavations.



Map showing the excavated dwelling at Bush Hill plantation. (SRARP/SCIAA drawing)

# Re-Examining Early Archaic Settlement along the Middle Savannah River

By J. Christopher Gillam

As the earliest cultural period of the modern Holocene environment, Early Archaic lifeways (ca. 8,000-10,000 years B.P.) are of special interest to archaeologists. The adaptations and organization of these early hunter-gatherers have inspired a wide body of research. Throughout the Southeast, models of Early Archaic settlement have been proposed with limited statistical testing of environmental context (e.g., Anderson and Hanson 1988; Goodyear et al. 1979). Therefore, the validity of such models is called into

as a "biocultural" model, the Savannah River example was based upon a generalized perception of the region's environmental diversity. It is proposed that winter would be the time of greatest "resource unpredictability," resulting in base camps in the vicinity of the Savannah River Site (SRS) locality. These base camps would be associated with secondary "logistic" camps along the upland tributaries (Anderson and Hanson 1988; Hanson 1988). Due to the broad assumptions about the environment and associated biologi-

endscrapers. This study includes 88 sites on the SRS containing artifacts dating to the period (Table 1). These sites contain a total of 91 Kirk bifaces and 189 unifaces.

The differences in environmental context of the artifact occurrences were examined using the multivariate analysis of variance (MANOVA) and univariate analysis of variance (ANOVA) techniques. The MANOVA tests the hypothesis that the means of the artifact occurrences are equal to one another for *all* environmental variables (Bray and

**Table 1.** Summary statistics for sites included in the sample. (Note: The number of artifacts reflects multiple components, *not* the frequency of Early Archaic materials alone).

Summary Statistics	Kirk-only Sites	Uniface-only Sites	Joint Occurrences
n (sites)	39	39	10
Mean (artifacts)	3,289	3,791	58,918
Minimum	2	1	983
Maximum	77,880	112,926	393,025
Standard Deviation	12,722	17,583	119,497
<100 Total Artifacts	11 (28%)	15 (39%)	0

question. Only by examining the environmental characteristics of artifact occurrences can we be certain of the nature of organizational complexity in the region.

The Anderson and Hanson (1988) model of Early Archaic settlement in the Savannah River Valley is often cited in the archaeological literature of the Southeast. It was inspired by Binford's (1980) models of forager and collector land use patterns amongst hunter-gatherers. Described

cal diversity, there may be problems with the existing model. No statistical tests were performed to examine the relationship of sites to their environment. This is a first step in evaluating many assumptions of the model related to the environment.

The environmental characteristics of two artifact type occurrences have been chosen for study. These artifacts include Kirk corner-notched bifaces and formal unifaces, primarily consisting of teardrop-shaped

Maxwell 1985). If the environmental characteristics of the artifact occurrences are the same, then the artifacts were used at every location of human activity. This would equate to a generalized forager adaptation to local resources (Binford 1980). Conversely, if differences in the environmental means occur, then bifaces and unifaces were used differently at locations of more specific activity. Under this circumstance, a collector strategy is indi-

See EARLY ARCHAIC, Page 12



## EARLY ARCHAIC, From Page 11

cated (Binford 1980). The collector strategy is the one expected under the existing Anderson-Hanson biocultural model.

The ANOVA tests the hypothesis that the means of the artifact occurrences are equal to one another for *each* environmental variable (Iverson and Norpoth 1987). These individual variables included elevation, slope, distance to nearest stream, distance

(Table 3). Conversely, Kirk bifaces occur closer to upland Carolina bays than uniface, likely corresponding to temporary hunting loci or extraction sites (Table 3).

These results enable the development of a more refined model of Early Archaic settlement along the Middle Savannah River (Figure 1). Whereas, the MANOVA tests generally support the Anderson-

landscape and remain representative of extraction activities hypothesized by Anderson and Hanson. Thus, Hanson's clean line marking the transition from foraging to logistical zones simply needs to be warped a bit to fit the archaeological record.

This pattern of base camps extending into the uplands along Upper Three Runs Creek is likely due to its proximity to neighboring

**Table 2.** MANOVA test criteria and Pillai's Trace F statistics for the hypotheses of "No Overall Kirk Effect" and "No Overall Uniface Effect."

Overall Effect	Value	F	Num DF	Den DF	Pr>F	Significant?
Kirk	0.1029	1.8588	5	81	0.1107	No
Uniface	0.1285	<b>2.3893</b>	5	81	<b>0.0449</b>	Yes

**Table 3.** Results of the univariate (ANOVA) analyses (df = 1; significant values in ***bold italics***).

Artifact	Elevation		Slope		Strm_Dist		Bay_Dist		SR_FP_Dist	
	F	Pr>F	F	Pr>F	F	Pr>F	F	Pr>F	F	Pr>F
Kirk	0.17	0.6802	1.41	0.2387	0.01	0.9220	<b>4.67</b>	<b>0.0335</b>	0.16	0.6880
Uniface	<b>8.89</b>	<b>0.0037</b>	3.30	0.0729	2.37	0.1273	0.12	0.7308	<b>4.82</b>	<b>0.0309</b>

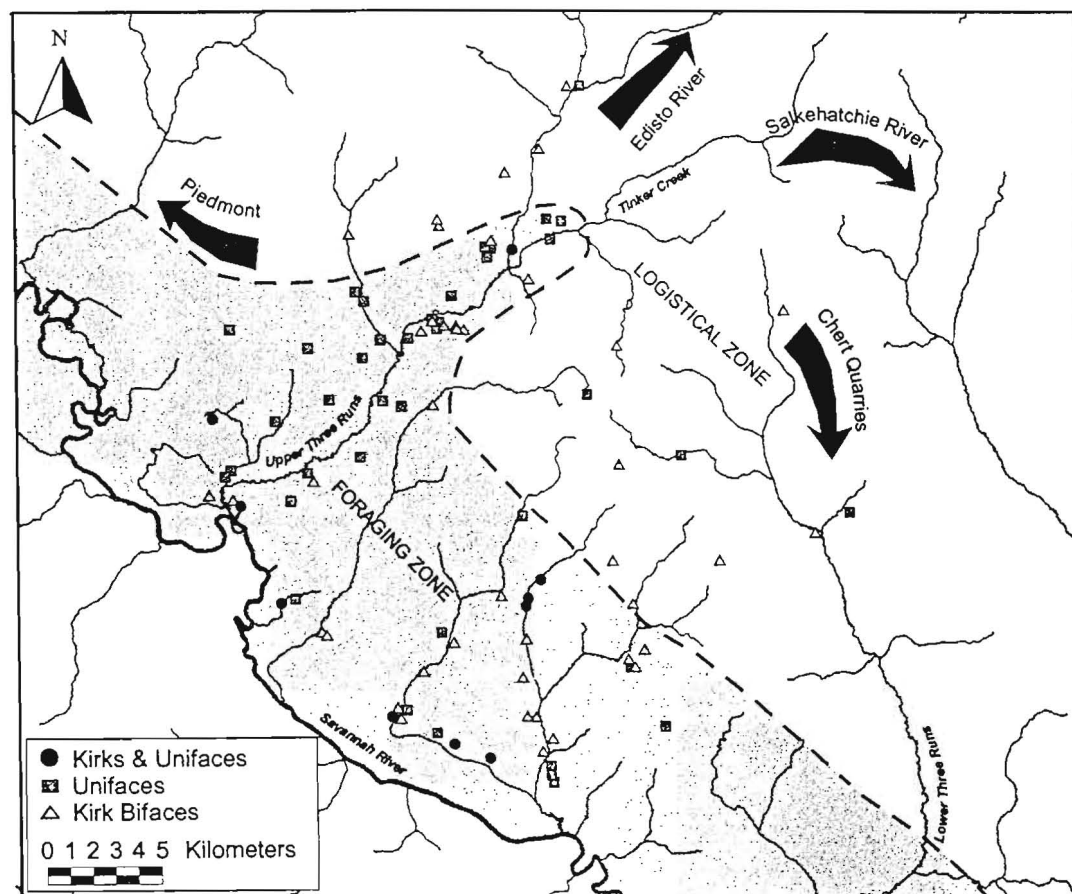
to nearest bay, and distance to the Savannah River floodplain. These tests give specific information regarding differences in the distribution of the artifacts, permitting the development of a model of Early Archaic land use.

It is demonstrated by the analyses that the collector model is appropriate for this locality. Overall, the uniface-containing sites are significantly different in their distribution than sites having Kirk bifaces (Table 2). Unifaces occur in closer association with the Savannah River and at lower elevations than the Kirk sites, suggesting their occurrence correlates to habitations or base-camp sites

Hanson model, the ANOVA tests demonstrate changes that need to be made to the existing model. Foremost, the distribution of base camps is not as restricted as was once believed. Uniface-containing sites are located throughout the hypothesized foraging zone along the upper and lower terraces of the Savannah River and extend several kilometers upland along the Upper Three Runs Creek (encroaching upon Anderson and Hanson's extraction zone). Base camps likely occurred nearly 20 kilometers upland, a short distance above the confluence of Upper Three Runs and Tinker Creek. In contrast, Kirk sites occur widely across the

localities. Following the headwaters of Upper Three Runs and Tinker Creek would provide a simple route for seasonal migration, interaction, and exchange with neighboring bands along the Salkehatchie and Edisto Rivers. Similarly, the Allendale chert quarries are a short distance away and are easily reached by following Lower Three Runs Creek from the uplands or the terrace formations overlooking the Savannah River floodplain. Additional flora and fauna are also available in the nearby Piedmont, approximately 25 kilometers upstream along the Savannah River.

**Figure 1.** A revised model of Early Archaic settlement along the Middle Savannah River.



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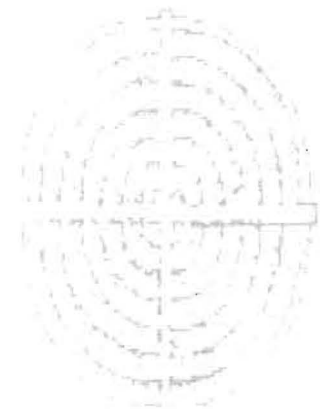
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# Research

## Parris Island Cemeteries, Part II

By Chester DePratter and James Legg

As previously reported in *Legacy*, Vol. 5, No. 2, Dec. 2000, we have been working on the African-American cemeteries on Parris Island, South Carolina. This project involved shallow trenching to delineate and map four known cemeteries so that they can be marked and protected. In addition to the cemetery reported in our earlier article (38BU1895), we have now completed work on the three additional cemeteries, and we have conducted a search for others that may be present on the island. Work on the three latest cemeteries and the search for others involved 14 weeks in the field between May 21 and October 3, 2001.

All four known cemeteries on the island contain African-Americans who occupied Parris Island as plantation slaves, beginning in the early 18th century, or as freedmen after the Civil War. The island had



Figure 1: Of approximately 350 to 400 graves in the Means cemetery at Santa Elena, only one is still marked. William Binyard, "gone but not forgotten," died in 1909. (SCIAA photo)

500 to 800 African-American residents until World War I, when the U. S. Marine Corps purchased the entire island for use as a training facility. Over the next 20 years the island's resident population gradually diminished, and in 1937 the last remaining civilian residents were forced to leave.

The Rifle Range cemetery (38BU39/1619) is located on the west side of Parris Island near the USMC rifle range complex. This cemetery includes six of the eight marked graves remaining on the island, all dating to 1919-1927. Test trenches revealed that the cemetery

is about 150 feet wide and 260 feet long, and includes between 300 and 400 burials. Several other components were identified, including various Native American occupations and associated shell middens, a late-18th and early 19th century occupation, and a WWII-era practice grenade range.



Figure 2: Heathley Johnson excavates an exploratory trench on the eroding bluff edge at Santa Elena. (SCIAA photo)

The Elliot cemetery (38BU1618), is also located on the west side of the island, on the north bank of Whale Creek. The only marked grave was covered by four large fragments of an 1877 tombstone for "Eliza Scott, wife of Richard Scott." It is not known if this stone marks the grave of Eliza



Figure 3: Spanish coins from cemetery test trenches at Santa Elena. Left: Copper 2 cuarto(?), reign of Ferdinand and Isabella (1476-1504). Right: Silver 1 real, reign of Phillip II (1556-1598), Mexico City mint. (SCIAA photo)

Scott, or if the stone was reused as a grave cover. Our test trenches revealed that this cemetery is about 230 feet long and 100 feet wide, and contains approximately 200 burials. The site also yielded evidence for other uses, including moderate activity by prehistoric Native Americans, and Marine Corps field

artillery firing in the 1930's and tactical training in 1950's to 1980's.

The Means cemetery is located within the Santa Elena site (38BU162) near the southern tip of the island. This cemetery has a single marked grave (Figure 1) dated 1909. Through excavation of more than 1,150 feet of trench, we determined that this cemetery is approximately 290 feet in length and 160 feet in width, and contains between 350 and 400 graves. Because there is active erosion of the shoreline along the east edge of this cemetery, we also excavated a series of trenches along the eroding bluff in an effort to determine whether graves were actively eroding into the marsh (Figure 2). We found no currently eroding graves, but the next major hurricane is certain to have some impact on the cemetery and its occupants.

Our work on this site exposed a variety of features and artifacts relating to other uses of the cemetery area. Evidence for prehistoric Native American activity was extensive, and included a heavy Stallings Island component dating to c. 4,200-3,100 B.P., and repeated Woodland occupations dating c. 3,100 to 1,000 B.P. Two substantially complete Woodland vessels were recovered from test trenches. The Spanish Fort

San Felipe (c. 1566 to 1570) moat runs along the southern edge of the cemetery, which is intrusive on the ditch of French Charlesfort (1562 to 1563). Features and artifacts from at least four Spanish houses were found in our delineation trenches (Figures 3, 4). Eighteenth- and 19th-century material was found in the southern portion of the cemetery, originating from the Means plantation complex which was located just southwest of the cemetery. Concrete footings from a temporary Marine Corps hospital built on top of the cemetery in 1918 were present in several trenches.

We estimate that the four known cemeteries together contain between 1,300 and 1,500 graves. This is too few individuals given the large population and the duration of their occupation on Parris Island. Additional cemeteries may be entirely lost under 20th-century development, or now lack the surface clues that might suggest their presence, such as the clusters of mature live oaks that mark the four known cemeteries. Our search for additional cemeteries targeted several such live oak stands, together with formerly wooded locations identified on historic maps. Exploratory trenching in these areas located no cemeteries, but revealed several other components of interest,



Figure 4: Spanish wall-trench house site discovered during the Means cemetery boundary testing. The round feature is probably a clay daub pit from the plastering of the exterior wall. (SCIAA photo)



Figure 5: Exploratory trenches near the Parris Island rifle ranges revealed a massive storm deposit, probably from the hurricane of 1893. (SCIAA photo)

including two freedmen's house sites and a variety of Native American occupations. One of the most interesting discoveries of the project was in an area south of the rifle ranges, where test trenches revealed an extensive storm washover deposit as much as six feet in thickness. This deposit is believed to date to the catastrophic hurricane of 1893 (Figure 5) which, according to one report, killed half of the people living on the island at the time.

The field crew for this project consisted of the authors, Heathley Johnson, Kris Asher, John Kirby, and Linda "Polly" Worthly. Carol McCanless and Susan Hollyday each volunteered for a few weeks. The backhoe used in trench excavations was provided by Patterson Construction Company of Beaufort; our operator was Kenny Bennett. Processing of collections in the laboratory is being carried out by James Legg, Heathley Johnson, Kris Asher, and John Kirby. Work on the Parris Island cemeteries was funded by the U. S. Marine Corps.



# Searching for the Barbados-Carolina Connection at 1670 Charles Towne

By Michael J. Stoner

The 1670 Charles Towne Archaeology Project completed its second field season during the Spring of 2001. The Project, a joint venture of the South Carolina Institute of Archaeology and Anthropology and the South Carolina Department of Parks, Recreation, and Tourism, continued the archaeological investigation of South Carolina's original settlement located at Charles Towne Landing State Historic Site, Charleston, South Carolina. Building upon the Project's earlier success, the second season expanded the first season's block excavation to cover nearly the entire extent of the 17th-century artifact distribution. (See Figure 1)

The giant block contained an array of interesting 17th-century artifacts, including: North Devon gravel-tempered and Delft ceramics, ball-clay pipe stem, olive green bottle glass, and wrought nails. The most intriguing artifacts found, however, were

unusual glazed redwares that occurred in the same distribution as the diagnostic 17th-century artifacts.

In the New World, low-temperature, kiln-fired earthenwares,

commonly called redware, developed from European industries that imported ceramics, potters, and the technology necessary to begin production on the colonial frontier. As early as the late 16th-century, Europeans manufactured redwares at or near their colonial settlements. The Spanish, for one, produced their

*Potter of Yorktown*" in Virginia established an English ceramic industry to supplement, or even replace, imported ceramics. In fact, the New England colonies developed a number of cottage industries in the 17th-century. Settlers at the Charles Towne settlement of 1670, however, arrived and occupied Albemarle

Point for only a short time. As a contemporary kiln is, as yet, unknown at the site, Charles Towne settlers likely imported their own redwares.

From 1670 to 1680, 684 individuals immigrated to Carolina. Not all of these settlers, however, came directly from England. According to historian Richard S. Dunn, only 134 of these settlers embarked from Britain, ten came from mainland colonies, and 146 came from the Caribbean colonies, primarily Barbados. Three hundred ninety-four individuals had no documented point of origin. The first vessel to arrive at Albemarle Point, the

*Carolina*, brought Barbadian passengers such as George Beadon and his five servants. These newly arrived Barbadians likely brought ceramics manufactured in Barbados.

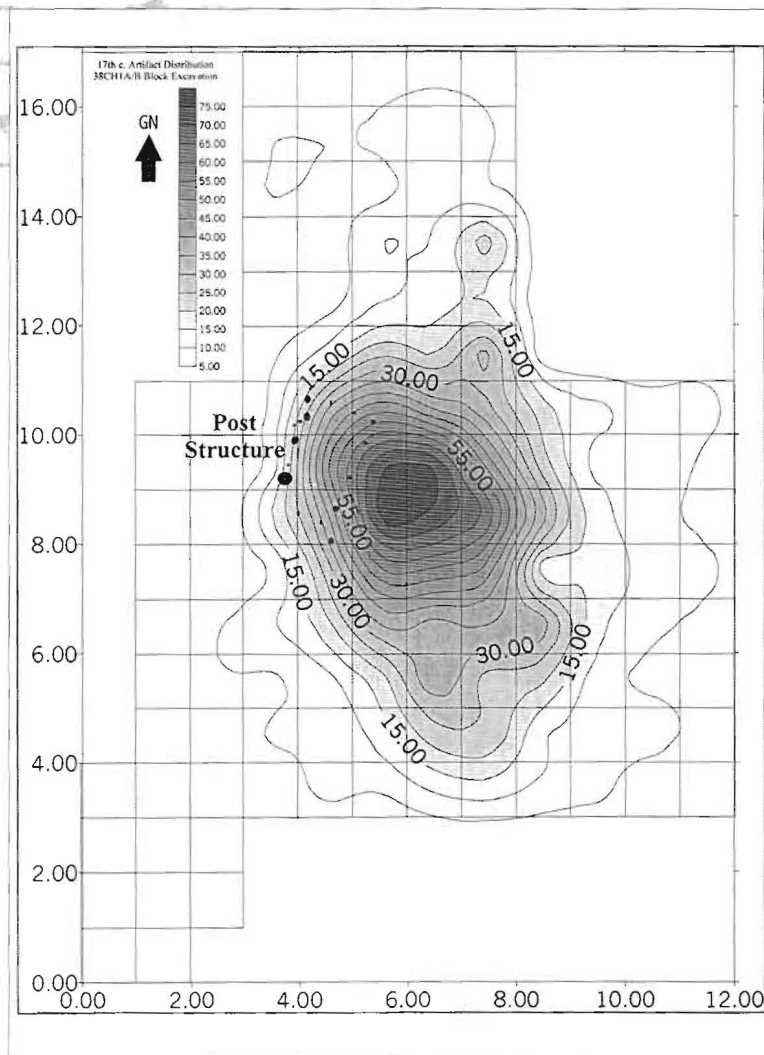


Figure 1: The combined 2000/2001 excavation blocks covered nearly the entire concentration of 17th-century artifacts. (SCIAA drawing)

own wares at their colonial outpost of Santa Elena, near present-day Beaufort, South Carolina (DePratter and South 2001; personal communication). Like the Spanish, the "Poor

Around 1650, sugar planters in Barbados began employing English potters to produce ceramic sugar molds and molasses-drip jars for use in the sugar industry. (See Figure 2) As sugar became more lucrative, the demand for sugar wares increased. Planters, therefore, found it necessary to train potters from among their own slave populations. Enslaved potters in Barbados also produced their own domestic wares. Archaeological evidence from the Codrington sugar plantation in St. Johns, Barbados, indicated that Barbados-made domestic wares became ubiquitous in the second half of the 17th century. (See Figure 3) Barbadian-manufactured tankards, bowls, and cooking pots—encouraged in part out of plantation self-sufficiency—replaced expensive and often difficult to acquire European-made ceramics at Codrington. Although the redware at Charles Towne was not necessarily manufactured at Codrington Plantation, an abundance of similar locally manufactured redwares from throughout Barbados certainly would have been readily available to

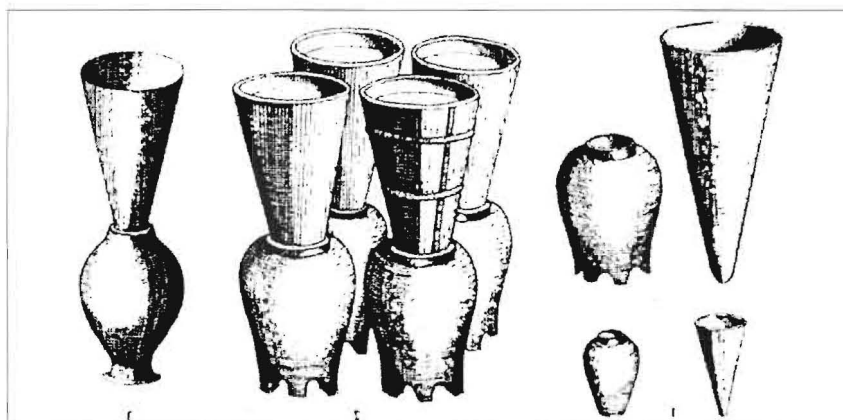


Figure 2: The Barbados sugar industry used ceramic vessels to cool molten sugar and collect molasses. (SCIAA photo)

Barbadian settlers in route to Carolina.

Barbadian redwares at Charles

where in the colonies. (See Figure 4) Barbadian redware has a dull orange-to light red-colored paste with a fine,

smooth, and well-mixed texture, and is often lead-glazed brown or green. The 1670 Charles Towne project subjected a sample of similar ceramics to a petrographic analysis. When compared to redware sherds manufactured in Barbados, sherds identified as potentially Barba-

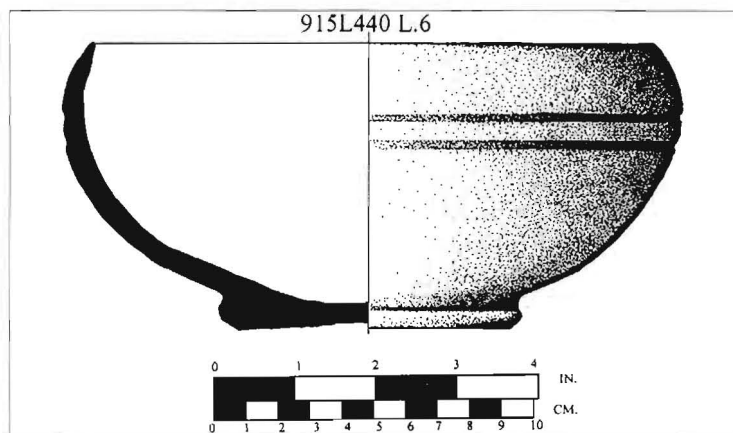


Figure 3: A Barbadian bowl excavated at Codrington plantation, Barbados. (SCIAA photo)

Towne, however, are superficially indistinguishable from redwares manufactured in Britain and else-

dian from 1670 Charles Towne contained evidence of volcanic ash (potassium feldspar), as did those from the Codrington Plantation.

With the completion of the second field season, the 1670 Charles Towne Archaeology Project is pleased to announce a direct link to Barbados. Barbados had a tremendous influence on the Carolina settlement and subsequent development. Barbadian immigrants were known to have settled along the Ashley and Cooper Rivers, and in Charles Towne. Now, the Barbadian presence can be identified in South Carolina through the presence of diagnostic Barbados ceramics.

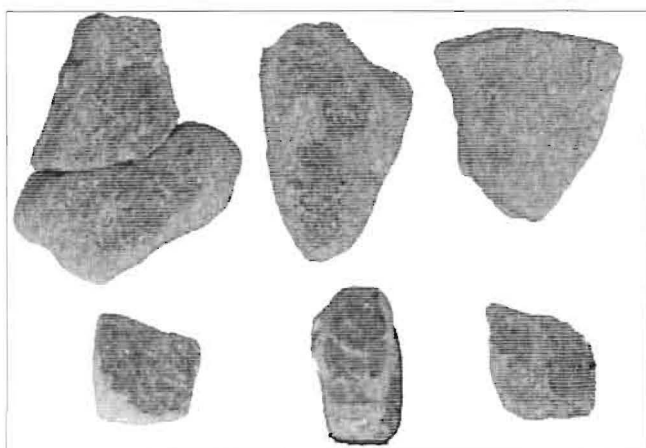


Figure 4: Barbadian ceramics from 1670 Charles Towne (SCIAA photo)

# The 2001 Allendale Paleoindian Expedition and Beyond

By Albert C. Goodyear

As reported in the last issue of *Legacy*, the Expedition returned to the Topper site with over 100 registered guests and excavated a large 5 by 10-meter unit adjacent to last year's pit. The excavation lasted five weeks from May 1-June 2, 2001. The donor-volunteers are the heart, soul, and muscle of our program, and without them we would not be able to conduct such large-scale excavations. These enthusiastic, hardworking people are listed by week at the end of this article. To all of them and those of previous years I give a hearty thank you.

In order to dig safely at depths of 2.0 meters, a 5 by 10-meter unit was opened and excavated to a meter below surface. At that point, the unit was reduced to a 4 by 8-meter unit and taken down to the Pleistocene terrace. Counting last year's 4 by 8-meter unit, that makes a total of 64 contiguously excavated meters in the pre-Clovis zone. Excavation in the upper meter produced the usual diagnostics of cultural periods known at Topper starting with Mississippian, Woodland, and Archaic components. One unusual discovery this year was that of a substantial so-called "MALA" lithic industrial feature. MALA is an anachronistic acronym created for an Archaic discovery by Ken Sassaman at the Pen Point site on the Savannah River Plant. It stands for "Middle Archaic-Late Archaic" in recognition of its chronological ambiguity.

At the nearby Big Pine Tree site, a site known for its rich MALA occupation, charcoal from what must be a MALA midden

was dated from 4,250 to 5,000 years B.P. At Topper an unusual concentration of 14 projectile points, over 100 whole and broken preforms, and sheets of thermally altered flakes from biface manufacturing were found, primarily in the eastern end of the block. In the five previous seasons of excavation, only a few MALA points were found emphasizing the richness of this year's lithic

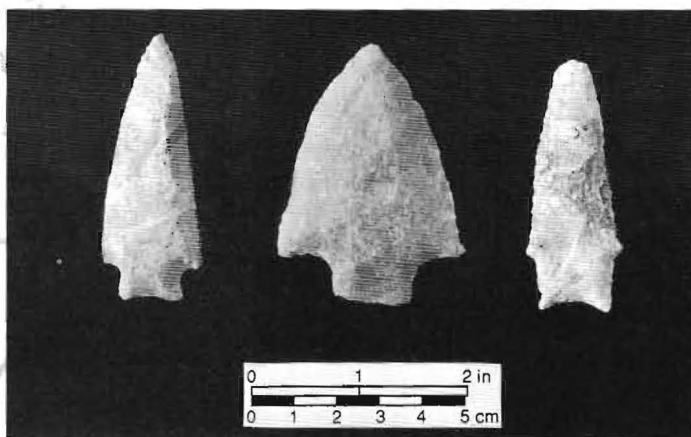


Figure 1: MALA points on either side of a Late Archaic stemmed point excavated in 2001 from the Topper site. (SCIAA photo by Daryl P. Miller)

feature. Late Archaic stemmed points, which follow MALA in time, are characteristically rare at Topper. In Figure 1, MALA points are shown on either side of a Late Archaic stemmed point illustrating the difference.

This year in the block excavation we recovered three Taylor side-notched points in situ. Counting one found in the adjacent block unit from

2000, a total of four Taylor points have now been recovered from the blocks, all from the 70 to 80 cm below surface level. Taylor points date from about 11,000 to 12,000 years ago. Examples of Taylor points excavated from Topper are shown in Figure 2. Numerous well-made unifacial tools are associated with this Early Archaic horizon including some large hafted forms. One interesting pattern that has been building over the various excavation seasons is the relatively frequent occurrence of so-called eggstones. These are small ovoid stones about the size

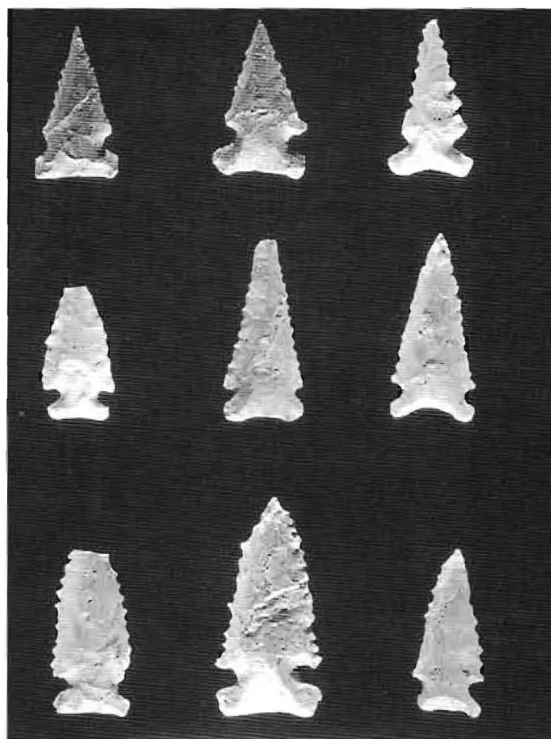


Figure 2: Taylor side-notched points excavated from the Topper site. (SCIAA photo by Daryl P. Miller)

of a hen's egg that have been smoothed to an ellipsoidal shape with a dimple ground in the top. It has been speculated that they may have functioned as bola stones for the snaring of game. A total of four eggstones have been found, two in the Early Archaic level, and two from backhoe spoil. One was made of magnetite. They appear to be associated stratigraphically with the Taylor side-notched point at Topper. Below the Taylor horizon exists another 10 to 20 cm of occupation considered to be Clovis based on the diagnostic biface preforms. No Clovis blanks or preforms were observed this year.

At 100 cm below surface the 5 by 10-meter unit was narrowed to a 4 by 8-meter unit in order to excavate the pre-Clovis levels. These were dug in the usual 1-meter squares in 5 cm levels screening through 1/8 inch mesh. This year several more obvious flake tools

were found including a pattern that is building with what we are calling bend-break tools. These burin-like implements are created by snapping thin flakes by percussion on wood or stone anvils. Using Allendale chert flakes, a small quartz hammerstone, and a wooden anvil, Kenn Steffy has been able to reproduce bend-break tools like those from Topper with a high degree of control. This tool form is turning out to be one of the most common stone tools in the Topper pre-Clovis assemblage. Examples are shown in Figures 3 and 4. Some of the flakes have three and four discrete breaks on their edges often

forming 90 degree angles. Bend break and radial break tools have previously been recognized in Folsom and Clovis sites in the West. They make excellent burins with their chisel-like tips and could also be used as graving tools. In his initial examination of Topper artifacts, Marvin Kay found graver wear on two bend break tools. The strong presence of burin-like tools and gravers implies the production of organic technologies made from antler, bone, wood and ivory.

Besides these tools, in the pre-Clovis zone more of the spatially clustered chert concentrations were found and mapped as features.

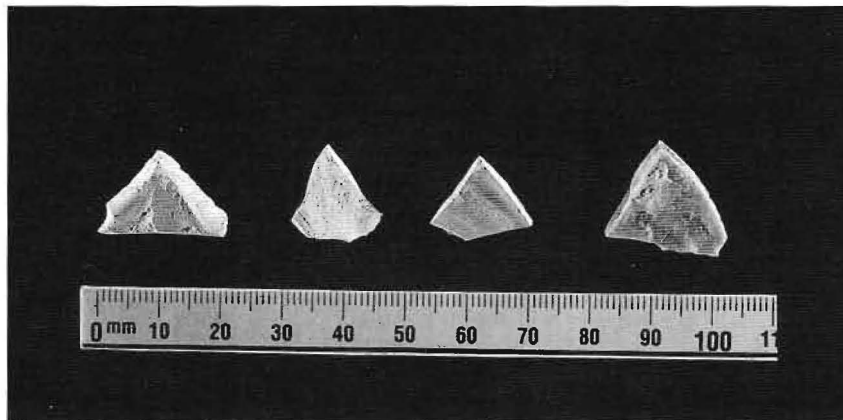


Figure 3: Smaller variety of bend-break tools from the pre-Clovis zone at the Topper site. (SCIAA photo by Daryl P. Miller)

These appear to be where the local hillside chert was smashed into usable pieces of chert.

In order to better understand how this chert was worked by pre-Clovis peoples, two primitive technology experts were brought in to work the natural chert cobbles into tools like those from Topper. Steve Watts of the Schiele Museum of Natural History in North Carolina and Scott Jones of Prehistoria Media of Georgia came for two days in October and performed experiments with flintknapping. As no large hammerstones have been recovered in the pre-Clovis zone, they had to

solve the problem of how to reduce the cobbles and boulders into knappable pieces. Large flakes with bulbs of percussion are rare in the pre-Clovis zone indicating that curated hard hammerstones were also unlikely. They solved the problem rather easily by placing cobble-sized pieces of cortical chert on boulder size anvils and smashing the core with another cobble (Figure 5). This produced the familiar multifaceted flakes and chunks of chert that we see in the Topper material. They showed that flat, bulbless flakes could be quickly and easily produced by this method. They then took the flakes and made

the bend-break tools by striking them with stone and antler hammers over wood and stone anvils. Interestingly, the concentrated piles of cortical debris created by this smashing technique

(Figure 5) resembled the concentrations of cortical and chert clusters we have been seeing in the pre-Clovis zone at Topper.

Some progress was made in the geochronology of the Topper site this year. While no organics suitable for radiocarbon dating have been found in the pre-Clovis zone nor in the Pleistocene terrace beneath, organic carbon was found this year in a backhoe trench underneath the block (Trench 14). At 4.25 meters below surface, which is just underneath the Pleistocene terrace, Tom Stafford obtained a date that was at least 45,700 years B.P. (CAMS-78602).

**See ALLENDALE, Page 20**



## ALLENDALE, From Page 19

Based on his dating of various fractions, the sediments are at least that old and in all likelihood past the range of radiocarbon dating. At 5 meters below surface in the same trench, the backhoe encountered black organic-rich gumbo clay with plant remains remarkably well preserved. There were hickory nuts, grasses, pine needles, bark, a twig with a bud on it, conifer bark and wood. Two of these macro-fossils were dated by Tom Stafford at 54,000 and 55,000 years B.P. indicating they too were C14 dead. Several gallons of this black fossil-rich clay have been saved to analyze for plant remains and pollen.

As previously mentioned in *Legacy*, South Carolina Educational Television has taken on the Topper site discovery as a project. Filming by Steve Folks of ETV has already begun. They recently recorded the South Carolina geologists and their students taking vibra-cores from Topper and nearby marshes. They also covered the experimental flintknapping activities of Scott Jones and Steve Watts. Many of you know Steve Watts as the "Ione Palaeolithic Hunter" from the Lantern Tour of

ASSC's Archaeology Festival. What is not generally known is that Steve was a consultant on Tom Hank's movie "Castaway." Instead of figuring out how to open coconuts with ice skate blades, we just wanted



Figure 4: Larger examples of bend-break tools from the pre-Clovis zone at the Topper site. (SCIAA photo by Daryl P. Miller)

him to open up Topper chert boulders and make burins. Steve was good enough to dress in his best Pleistocene skin garb for the ETV camera (Figure 6). Some re-enactment images such as these may be used in the ETV program to help create a sense of humanity in the



Figure 5: Scott Jones, primitive technology consultant, replicating stone tools from the Topper site. (SCIAA photo by Daryl P. Miller)

Pleistocene at Topper. The ETV program is expected to air sometime in the fall of 2002.

The next big thing with the Topper site research will be the Allendale-Topper Site Conference—

Ice Age Man in South Carolina. This will be an archaeological conference held for the public January 25-26, 2002 on the University of South Carolina campus. The flyer advertising this conference with registration information is printed on Page 3 in this issue of *Legacy*. The purpose of this conference is to communicate to the volunteers and donors of the Allendale Paleoindian Expedition plus other interested people the findings with Topper to date. Registration is open to the public. The various scientists who are working on different aspects of the site will be brought in to give public-friendly presentations on

their research. On Friday afternoon of January 25th, there will be an open house at SCIAA with a display of the Allendale artifacts recovered over the past five years. That evening there will be a reception near the university campus to meet the scientists. On Saturday, January 26th, the conference will be held all day in the Campus Room of the Capstone. That evening, there will be a banquet and a presentation on our vision to start an Early Man Center here at USC for the exploration and discovery of Pleistocene archaeological sites in the Southeast.

A big thanks is due the supervisors this year who so ably managed the excavation. These include Kenn Steffy, Van Steen, Grayal Farr, David Butler, and Bob Cole. In the field lab,

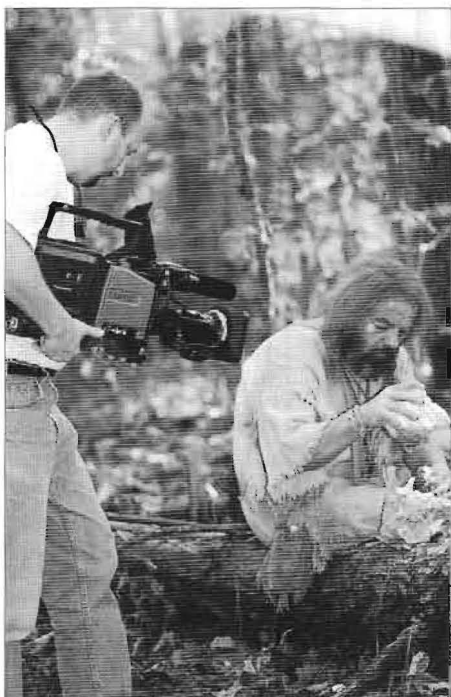


Figure 6: Scott Smoak, SC ETV videographer, discovers "Topper Man" Steve Watts, primitive technology consultant, working Allendale chert. (SCIAA photo by Daryl P. Miller)

Bill Lyles, Bill Larson, and Nancy Olsen did a wonderful job keeping the artifact washing going. Daryl Miller provided his usual great photography. Thanks also to David Anderson and his wife Jena Lee who threw another magnificent cookout, otherwise known as the seventh annual Paleocarnivore Ball, at their home in Williston. David Hodges led an enthusiastic group on a tour of the site and stayed for dinner and an evening program. Clariant Corporation, owner of the site and our host, was once again more than generous to allow us as their guests for five weeks. Bill Hartford, Site Manager; Susan Yates, Human Resources Manager; Tom Pinkney, Head of Security; and John Thompson, Ace Backhoe Driver; are always most helpful and enthusiastic about our work. We couldn't do it without them.

The Allendale Paleoindian Expedition operates by the financial gifts and donated services of many folk, particularly the volunteers who sign up for a week or more. These

people who helped make the dig happen for 2001 are listed below.

### First Week

Sheila Jackson, Greer, SC  
Gerald Koenig, Austin, TX  
Dean Kokenes, Charlotte, NC  
Robert Phillips, Jacksonville, FL  
Henry Wilkinson, Charlotte, NC  
Neill Wilkinson, Charlotte, NC  
Dennis Zeunert, Virginia Beach, VA

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Andy Byars, Columbia, SC  
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Nan Faile, Leesville, SC  
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Vicky Hollingsworth, Newnan, GA  
Terry Hynes, Atlanta, GA  
Bill Kaneft, Sumter, SC  
Gerald Koenig, Austin, TX  
Grace & Thor Larsen, Stuart, FL  
Alissa Lee, Mt. Holly, NC  
Nancy Olsen, Newnan, GA  
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Cynthia Yates, Harrisburg, NC  
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# ART Activities in 2001

By Nena Powell Rice

2001 was a great year for the ART Board of Trustees. The board meets four times a year in different areas around the state in conjunction with SCIAA archaeological projects in progress. These projects give the board the opportunity to meet the staff and allow the board to see the fieldwork being conducted first hand. We also combine these meetings with archaeological education and provide opportunities to meet the local community with several social gatherings planned.



Left to right: Judy Burns, Sharron Blackwell (hostess), Tony Harper, Lou Edens, and Nena Powell Rice gather at Sharron Blackwell's dinner party. (SCIAA photo by Marion Rice)

near Aiken, South Carolina. On Thursday, we began our two-day

Lawton Mound, lead by SCIAA ART Board Member, Adam King, and SCIAA staffer Keith Stephenson. We stayed overnight at the historic 1898 Holley Inn, then were bused to the Savannah River Site on Friday morning. We were treated to a tour of Ellenton, where the SRARP archaeologists conducted oral histories of the former residents and had a very interesting tour of several areas on the property, including the K-Reactor (from the outside).

We were very fortunate to be invited to upstate for the August 16-17, 2001 meeting. Vice-Chair Antony Harper and Sharron Blackwell graciously hosted a lovely dinner and cocktail party on Thursday



Foreground: Marie Read and Betty Anne Tate, Bruce Rippeteau and Simmons Tate; Background: Scott and Lezlie Barker, Al Goodyear, and Lou Edens at Sharron Blackwell's dinner party. (SCIAA photo by Marion Rice)

On February 16-17, 2001, we held the meeting in Columbia in conjunction with the 27th Annual Conference on South Carolina archaeology, with the opportunity to meet Dr. George Bass, a well known underwater archaeologist from Texas A & M and Bodrum. On Saturday, the ART Board had the opportunity to attend the full-day conference and learn about current archaeological research being conducted in South Carolina.

On May 17-18, 2001, the ART Board had the opportunity to visit SCIAA's Savannah River Archaeological Research Program (SRARP)

gathering with a field trip to the important Mississippian site of



Back: Al Goodyear, Emerson Read, Bruce Rippeteau, David Masich, and Walter Wilkinson; Front: Nena Powell Rice at Sharron Blackwell's dinner party. (SCIAA photo by Marion Rice)



Left to right: Shirley Kirby, Judy Burns, Esther Shirley, Sissy Frierson, and Marie Read gather at Sharron Blackwell's dinner party. (SCIAA photo by Marion Rice)

Janie Kirby's home (son of Jim Kirby) in Chapin. (This board meeting was held after this issue of *Legacy* went to press, so results of staff awards, new officers, and new board members will be announced in the next issue.)

evening in Greenville, where Albert Goodyear had the opportunity to show his Allendale piece, which aired on CNN June 1. On Friday morning, we gathered for our Board Meeting at Tony's Lake House near Simpsonville, and afterwards, enjoyed a barbecue lunch and a boat ride on the secluded lake.

On November 29-30, 2001, Chair Jim Kirby and his wife Shirley will host another lovely dinner and cocktail party at their home in Chapin, South Carolina near Columbia. State

Archaeologist for Underwater Christopher Amer will give a 20-minute presentation on the raising

of the *H. L. Hunley* and an update on the continuing analysis of this extraordinary artifact.

Sadly, several of our Board Members will rotate off this year after serving two two-year terms.



Left to right: Stone Harper, Walter Wilkinson, Russ Burns, Judy Burns, and Lou Edens take a boat ride at Tony Harper's property near Simpsonville, SC. (SCIAA photo by Marion Rice)

The ART Board Meeting on Friday will be held at Kimbrell and

They are John Frierson (Past Chair), Secretary Cyndy Hernandez,

Members Russell Burns, Lou Edens, Emerson Read, and Esther Shirley. Jim Kirby will step down as Chair and will now serve as Past-Chair for one year. Antony C. Harper will serve as Chair in 2002. Board members who remain on the board are Lezlie Mills Barker, Christopher Clement, Chester DePratter, Adam King, Charles Peery, James Spirek, Simmons Tate, and Walter Wilkinson.



Left to right: Stone Harper, Walter Wilkinson, Russ Burns, Bruce Rippeteau, Tony Harper, Sharron Blackwell, and Nena Powell Rice on Tony's lake property near Simpsonville, SC (SCIAA photo by Marion Rice)

# Special Activities

## Dr. William M. Kelso, Jamestown Archaeologist, to Speak at Annual Archaeology Conference February 22-23, 2002

By Chester DePratter and Nena Powell Rice

The 28th Annual Conference on South Carolina Archaeology will be held on Saturday, February 23, 2002, at the Capstone Building on the University of South Carolina, Columbia campus. Admission to the conference is \$10 for non-members, \$8 for adult members, and \$5 for students/children. (You may apply for membership at the event to receive the reduced rate.) There will be a luncheon for \$7 and the evening banquet, featuring Dr. William M. Kelso as the distinguished honorary speaker, will be \$18. The evening lecture is titled, "Historical Archaeology of Lost 1607 James Fort at Jamestown, Virginia." Dr. Kelso will also present a lecture at a free SCIAA Archaeology Colloquium on Friday afternoon in the Gambrell Hall auditorium, Room 153 at 3:00 PM. The title of his special afternoon lecture is, "Jamestown Rediscovery: Search for the Archaeological Roots of Modern American Society." This lecture is supported in part by a grant from the South Carolina Humanities Council. To pre-register for the conference, luncheon, and banquet on Saturday featuring Dr. Kelso's lecture, please send a check to Treasurer Nena Rice, made payable to the ASSC. For further information, please contact Nena Rice at [nrice@sc.edu](mailto:nrice@sc.edu) or (803) 777-8170.

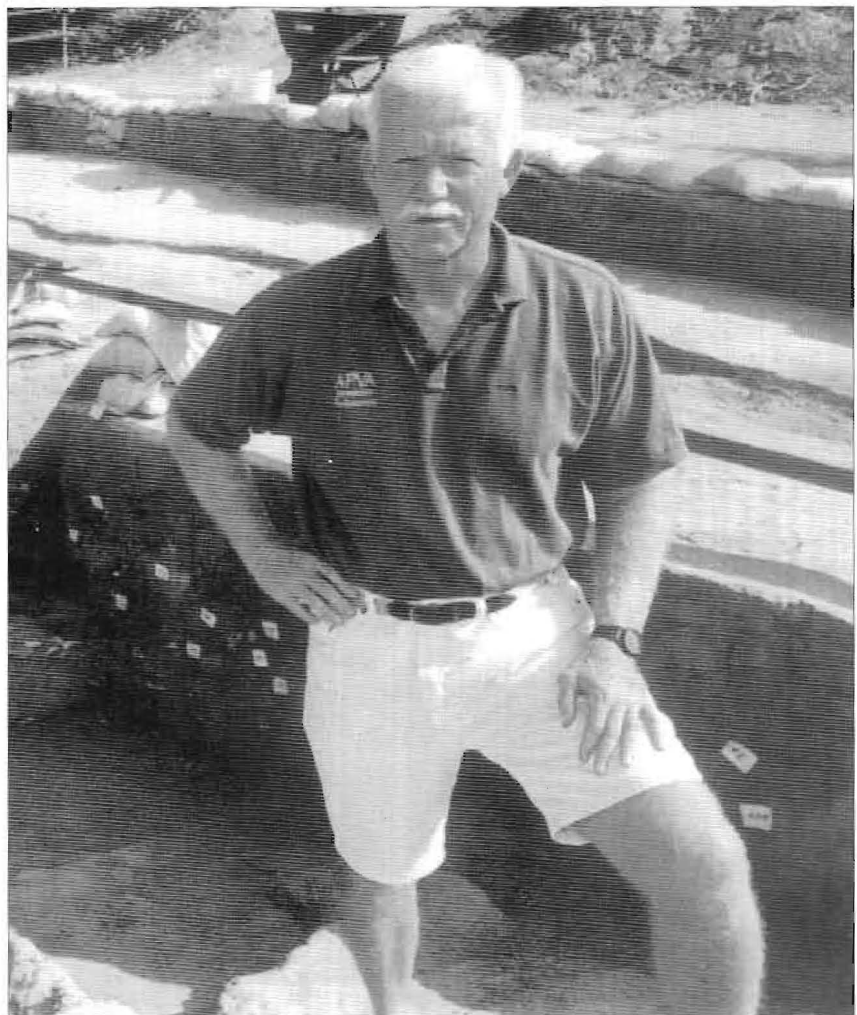
### William M. Kelso

As a boy growing up in Ohio, William Kelso gave little thought to the Jamestown settlement in faraway

coastal Virginia. After completing a bachelor's degree in history at Baldwin-Wallace College in Berea, Ohio, he moved to Virginia to get a master's degree in history at William and Mary College. Upon arriving in Virginia, he went to Jamestown to see the remains of this early settlement. In addition to examining the exposed house foundations from the later part of the Jamestown settlement, he visited the confederate earthwork on the edge of the colonial settlement.

There, beneath the earthwork, he saw a layer of soil that he thought might be a remnant of the original 1607 fort and settlement. After being told by a park ranger that the original fort had, in fact, eroded into the James River, he left, but he did not forget what he had seen.

After completing his master's degree in 1964, he taught high school and spent his summers working as a field assistant to Ivor Noel Hume, dean of Virginia colonial archaeology.



Dr. William M. Kelso at Jamestown. (Photo courtesy of William M. Kelso)

From Noel Hume, he learned the principles of British historical archaeology, the study of material remains of the past at historical sites occupied since the time of Christopher Columbus. In a recent interview with "The Richmond Forum," Kelso said "No formal training in this specialized type of archaeology was available at the time. Studying with Noel Hume was the best thing that could have happened to me. He knew how to simplify archaeology and make it understandable." Kelso was hired by the Georgia Historical Commission in 1967 to work on a number of sites including Wormsloe Plantation near Savannah. Using what he had learned from Noel Hume, he used those excavations as a basis for the dissertation he completed as part of his Emory University Ph.D. in 1971.

Over the next 22 years, Dr. Kelso developed a reputation as one America's foremost historical archaeologists. His work focused on Virginia where he served as director of archaeology at Colonial Williamsburg's Carter's Grove

plantation, and at Thomas Jefferson's Monticello and Poplar Forest estates. For several years, he worked at the Virginia Landmarks Commission, first as a historical archaeologist and later as the Commissioner of Archaeology for their Research Center for Archaeology.

He considers his work on the Monticello slave quarters to be one of his greatest accomplishments. This work provided important information on slave life and the role of slaves in the plantation system. As a result of this work, visitors now tour these slave quarters and receive a better understanding of the plantation system and all of those residing at Monticello.

Through all of these various projects, Dr. Kelso still recalled his first visit to Jamestown and what he had seen beneath the Civil War earthwork there. In 1993, he left his position at Monticello and convinced the Association for the Preservation of Virginia Antiquities (owners of the part of the Jamestown site where the earthwork was located) to hire him and his colleagues, Nicholas

Lucchetti and Bly Straube, to work on the Jamestown site with the intention to find 1607 James Fort and the original Jamestown settlement.

This move came at a time when the APVA was beginning to think about the upcoming 400th anniversary of the Jamestown settlement. Rather than just preserving the site as they had done for the previous century of their existence, the Association hired Kelso and his team to undertake a ten-year long search for James Fort.

In the first square he excavated at the site, Kelso found a clay pipe and pottery sherds that he knew dated to the James Fort era. Within a matter of weeks he had found postholes from a palisade in precisely the area where he had for so long thought that James Fort might be found. In 1996, Dr. Kelso and the APVA announced to the world that they had found James Fort.

Dr. Kelso has lectured throughout the U. S. and in Europe. He is a banjo player and a great fan of bluegrass. He and his wife Ellen reside in Jamestown.



## **CALL FOR PAPERS / 28TH ANNUAL CONFERENCE ON SOUTH CAROLINA ARCHAEOLOGY** **By Chester DePratter**

It is time again to prepare for another great annual conference on South Carolina archaeology, sponsored by the Archaeological Society of South Carolina, Inc (ASSC). All new and renewing members of the Society are eligible to present papers at the conference. Presentations should concern the archaeology of South Carolina or the greater Southeast and be less than 20 minutes in length. Colonial Period contributions are particularly encouraged for this year's conference. A slide projector and screen will be provided. Please send abstracts (100 word maximum) by January 1, 2002 to:

Chester DePratter, ASSC Conference Chair  
SC Institute of Archaeology and Anthropology  
University of South Carolina  
1321 Pendleton Street  
Columbia, SC 29208  
(803) 777-8170 Office  
(803) 254-1338 FAX  
depratter@sc.edu





# Underwater Archaeology

## Port Royal Sound Survey: Search Begins for *Le Prince*

By James Spirek

### Introduction

For over five years now, the Underwater Archaeology Division has implemented the Port Royal Sound Survey with the goal to inventory shipwrecks for management purposes and for research opportunities. Present historical research indicates that over 50 recorded shipwrecks occurred in the environs of the sound. Over 40 of these ships wrecked on the shoals fringing the entrance channel to the sound. Predominately 18th-century British merchant ships, these ships, while sailing along the Atlantic Coast, ended their careers as casualties of the shoals. During the Civil War several colliers and other merchant ships struck the shoals due to storms or navigation errors. Perhaps the most historically and archaeologically intriguing shipwreck documented off Port Royal Sound is the French corsair, *Le Prince*, which shipwrecked in early 1577. From a nautical archaeology point of view the discovery and examination of this ship would reveal a component completely absent from the archaeological record associated with the early exploration, colonization, and contention of the New World—a 16th-century French corsair shipwreck. Several previous *Legacy* articles discuss archival research efforts to locate documents pertaining to the shipwreck. This article will focus on the first attempt to find the physical remains of the ship through remote sensing operations and visual inspections.

### The Search Begins

The objective of the 2001 remote sensing survey was to examine the shoals and sandbars alongside the channel entrance to Port Royal Sound. The primary rationale for selecting this theater of operations was to search for the remains of the French corsair *Le Prince*, along with other known casualties. The main survey area encompassed the shoals and sandbars fronting the entrance to Port Royal Sound. Some secondary survey areas within the sound were prepared in the event of inclement weather precluding survey in primary areas (See Figure 1). Several factors determined high priority survey areas including historical research, coastal geomorphology, and oceanographic data that suggested a high potential to contain the remains of *Le Prince*, although other shipwrecks were anticipated to be caught in the electronic net we were casting. The survey strategy consisted of three parts: (1) a magnetometer survey to detect magnetic anomalies, (2) a magnetometer and sonar operation to gather more informa-

tion on prioritized magnetic anomalies, and (3) a visual inspection by archaeologists of magnetic and/or acoustic anomalies. Funds from an Archaeological Research Trust grant and from the anonymous donor to Drs. Chester DePratter and Stanley South's Santa Elena/Charlesfort research were used to implement the survey.

The electronic ensemble to search for *Le Prince* and other shipwrecks in Port Royal Sound consisted of the ADAP-III system. This system incorporates a Geometrics G-880 cesium magnetometer (used to detect steel or iron), a Marine Sonic 600 Khz side scan sonar (used to acoustically

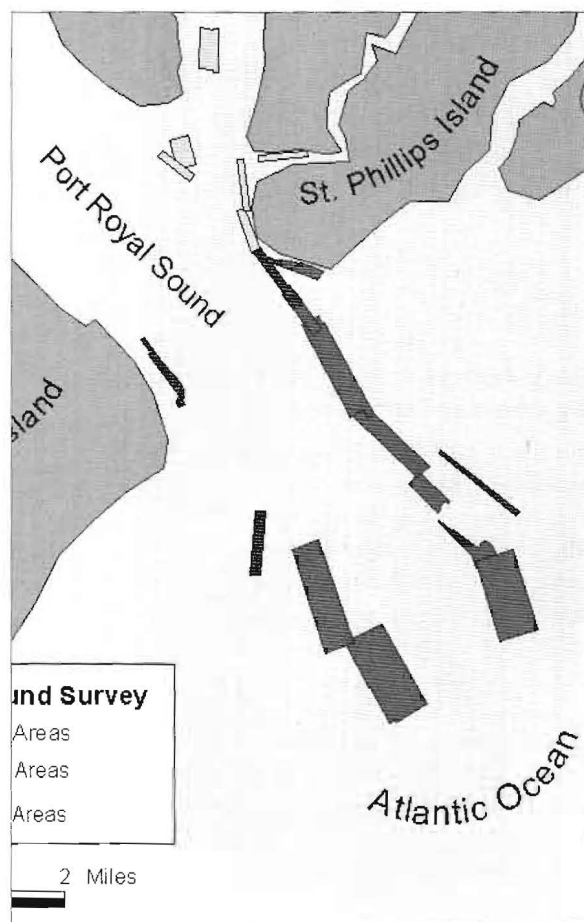


Figure 1: Map showing 2001 survey areas. (SCIAA drawing)

picture the bottom), a Cetrek digital fathometer (used to record water depth), and a Trimble AG132 Differential Global Positioning System (DGPS). Both the magnetometer and sonar sensors are towed behind our 25-foot research vessel, while the fathometer sensor is attached to the boat. Three onboard computers handle information acquisition comprising position, depth, sonar, and magnetometer data. Two auxiliary screens provide real-time guidance to the helmsman to ensure accurate survey transects or to steer towards a specified anomaly. Following data collection the magnetometer files are post processed using Gradient Analysis, a proprietary software to smooth the diurnal effects of the sun on the magnetometer, which are then entered into Microsoft Excel to create a database. Once all the data is finessed and smoothed the information is added to Earth Systems Research Institute's ArcView software, a Geographic Information System (GIS) program. We use the software to analyze and manipulate the magnetometer, bathymetric, and sonar data (See Figure 2). From this point, the magnetic or acoustic anomalies are prioritized for visual inspection by archaeologists to ascertain the anomaly source, for example, whether it is modern debris or a shipwreck.

In late February 2000, we attempted to begin the magnetometer survey, but were thwarted when the magnetometer ceased functioning on the first day. Delays in repairs and other job priorities precluded returning to Port Royal Sound until the following year. Finally launching the magnetometer survey from March 19 through April 12, 2001, we managed to complete approximately 409 linear miles covering an area

around 3.26 square miles. The survey boat traveled between six and seven knots and the lane transects were spaced 20 meters apart. Over 202,373 magnetometer points were gathered, which can be likened to an equal number of shovel tests. Water depths ranged from two to 40 feet. A total of 526 magnetic anomalies greater than one gamma, a measurement unit used to express the intensity of a magnetic field, were detected in the survey area. Of these anomalies, four anomalies showed promise as potential shipwreck sites, and another 38 most likely represented single-source objects.

Refining operations occurred from June 25 to 29 to gather more magnetometer and sonar information of the 42 prioritized anomalies. The refining process was intended to better define the geographical position of a magnetic anomaly and with the sonar to determine whether the anomaly was exposed or buried, and if exposed, to tentatively identify the target. Unfortunately, we had completed refining seven magnetic anomalies when late on the first day the sonar fish separated from its cable. Two days were spent looking for the sonar sensor until it was found and another two and a half days were spent defining targets solely with the magnetometer. A total of 24 targets were investigated. Seven targets were further defined

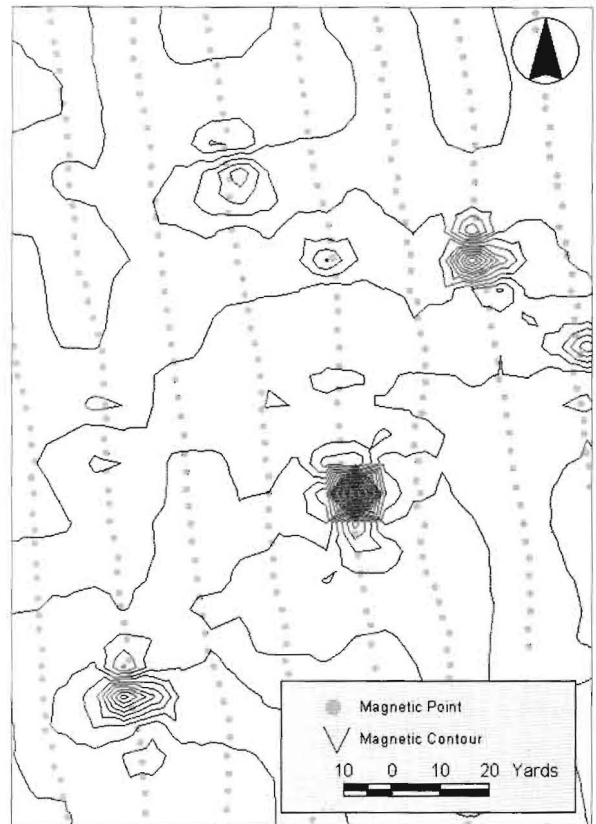


Figure 2: Several magnetic anomalies in a survey block. (SCIAA computer graphic)

with both the magnetometer and sonar, including three of the highest priority ones, while the remainder were further defined solely with the magnetometer.

From September 10 to 14, we donned our diving gear to visually inspect several of the magnetic and acoustic anomalies (See Figure 3). Two volunteers assisted us during the diving operations, Ronnie Rodgers from the Georgia Division of Historic Preservation, and Charles Hughson, my old colleague from the Pensacola Shipwreck Survey. Unfortunately, weather, heavy shrimp boat activity, and equipment problems hindered our diving operations. We managed to dive only one magnetic anomaly that had also produced an acoustic image showing a rectangular object (Figure 4). The water depth at the target was approximately 24 feet and visibility was about a foot or so in the water

See *LE PRINCE*, Page 28

## LE PRINCE, From Page 27

column but practically nil at the bottom. The iron object was rectangular and measured approximately 5 feet wide by 12 feet long and stood about a foot and a half off the bottom. Snagged around the box were some shrimp nets. Definitely not part of a 16th-century ship, the object's function is indeterminate at this point.

Inclement weather on the last day of diving forced us over to Skull Creek where we took the opportunity to dive a known shipwreck in the channel. Sonar images revealed a large ballast mound with no visible ship timbers. During the dive, we encountered very large quarried ballast rocks, loose bronze drift pins, and large metallic objects strewn about and along the periphery of the ballast mound. The remains may represent the Martins Industry Lightship that was brought into the creek and destroyed by the Confederates in 1862 prior to the arrival of the Federal's Port Royal invasion force. More research is needed for a more conclusive identification, but the large stones seem to indicate that the ballast was intended to stay in place as one would expect for a lightship meant for year-round station out by the shoals, and the bronze fasteners

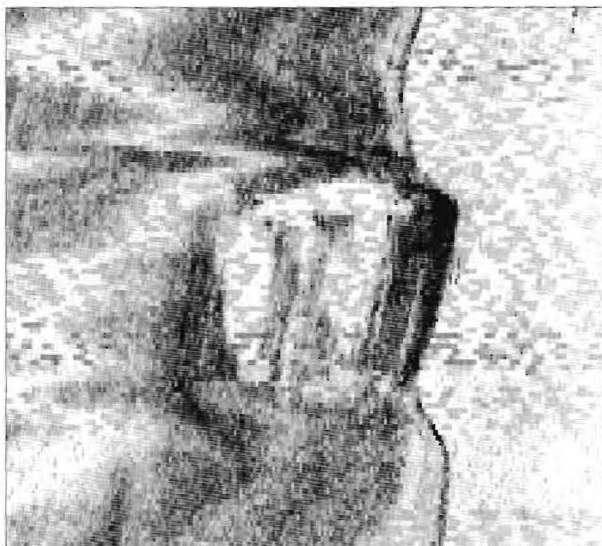


Figure 4: A sonogram of the rectangular object. (SCIAA computer graphic)



Figure 3: Joe Beatty about to dive on an anomaly off Hilton Head Island. Pictured from left to right: Ronnie Rodgers, Charles Hughson, Joe Beatty, and Lynn Harris in the water. (SCIAA photo)

indicate a temporal range from the 1850s. We still have three high priority anomalies to investigate to determine the source of the magnetics.

### Conclusion

In the near future we plan to organize another ground-truthing endeavor, as well as to continue remote sensing operations. Good headway has been made in the first field campaign to search for *Le Prince* and other luckless victims of the Port Royal Sound shoals, despite equipment problems. We are also looking at using another method of remote sensing by employing an airplane to conduct an aerial magnetometer survey. An airborne magnetometer survey would serve to speed up the investigation by covering a large amount of the project area, which in turn would allow

us to focus strictly on examining detected magnetic anomalies. Whichever systematic survey method, or combination of the two, we use should eventually reveal the site of the *Le Prince* shipwreck, as the documents clearly state the ship was lost on the shoals of Santa Elena (Port Royal Sound).

I would like to express my thanks to the Board of Trustees of the Archaeological Research Trust for providing the funds and extending the grant to search for *Le Prince* and other shipwrecks and for their continued support of this research project. A debt of gratitude is owed to the Anonymous Donor of Drs. Chester DePratter and Stanley South for funds to assist in the project. Personnel at the Waddell Mariculture Center also helped in our endeavor with lodging and logistical support. Also, a debt of gratitude is owed to all the individuals who have participated in or lent support to our project. If you would like to help in our efforts please consider sending a tax-deductible contribution to the Archaeological Research Trust Fund earmarked for the Port Royal Sound Survey.

# Staff News

## STUDENT ARCHAEOLOGIST FROM AUSTRALIA TRAVELS TO STUDY SOUTH CAROLINA

By Michael Stoner

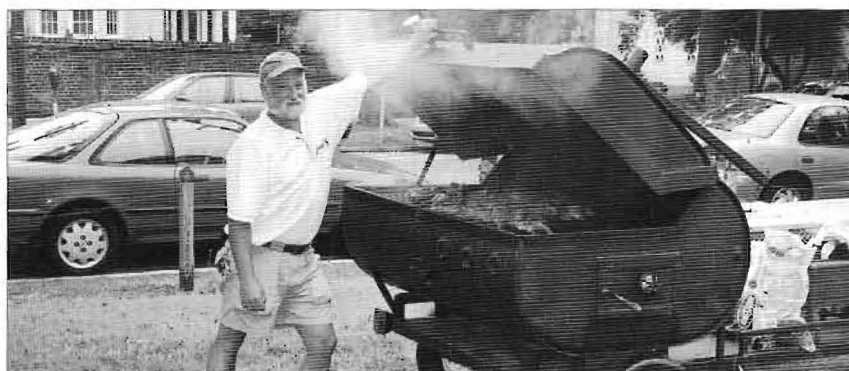
Heritage Tourism, archaeology, and education brought Bronwyn Jewell thousands of miles from James Cook University, Australia, to study South Carolina archaeology. The recipient of an exchange scholarship, Jewell undertook an independent research study in Heritage Tourism and Historic Preservation at the College of Charleston. Her research involved looking at the underlying motives of heritage tourists at Drayton Hall and also the possibility of a Sweetgrass Development Center at Tibwin plantation near McClellanville, South Carolina. As an archaeology major, however, Jewell volunteered to participate in the archaeological investigations of the 1670 Charles Towne Project. Jewell assisted the project by excavating, washing, and cataloging artifacts during the last field season of the SCPT and USC/SCIAA venture. "There are so few 17th-century sites left in the United States. I am fortunate to have this opportunity at Charles Towne Landing," said Bronwyn.



Bronwyn Jewell (right) observes archaeologist Nicole Isenbarger's (left) shovel test. (SCIAA photo)



Bruce Rippeteau (right) joins Robert Moon and Tammy Forehand at their exhibit during the 14th Annual Archaeology Festival at Charles Towne Landing State Historic Site. (SCIAA photo)



Underwater diver Joe Beatty prepares a 'smokin' barbecue lunch during the September SCIAA staff meeting. (SCIAA photo)



Nena Powell Rice attends a "Teacher Expo" program at the South Carolina State Museum during the 10th Annual SC Archaeology Month. (Photo courtesy of Mary Evans of McKissick Museum)





Governor Jim Hodges (seated) signs the 10th Annual South Carolina Archaeology Month proclamation. Present left to right are: David Jones (PRT), Steve Smith (COSCAPA), Rodger Stroup (SHPO), Nena Powell Rice (Archaeology Month Coordinator), Bruce Rippeteau (Director of SCIAA), Wayne Roberts (ASSC), Jon Rood (DNR), Jonathan Leader (State Archaeologist), Christopher Amer (State Archaeologist for Underwater), Tom Kohlsaat (DNR), Mike Foley (PRT), and Christopher Judge (DNR). (Photo courtesy of the Governor's Office)



Left to right: Christopher Amer, Bruce Rippeteau, and Jonathan Leader receive bomb from B-25 bomber found in Lake Murray for conservation. (SCIAA photo)

## ROBERT MOON WINS SEAC POSTER COMPETITION

By Adam King

Robert Moon, Public Outreach Coordinator for the Savannah River Archaeological Research Program, was a winner in the first annual Southeastern Archaeological Conference Poster Competition. The competition was held at the 58th annual meeting of the Southeastern Archaeological Conference held in Chattanooga, TN. The winner poster was titled "The Bingham Site: An Archaeological Experience for Middle Schoolers." It details a school program co-sponsored by the Savannah River Archaeological Research Program and the University of South Carolina at Aiken called "Digging for Data camp." In addition to a certificate recognizing his poster, Rob was also treated to an air tour of archaeological sites in the Tennessee River valley.

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